LC7.1E

PA

For manual SDI plasma panel see: 3122 785 16870

Service
Service
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Service Manual

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PHILIPS

1. Technical Specifications, Connections, and Chassis Overview

Index of this chapter:

Notes:

- Figures can deviate due to the different set executions.
- Specifications are indicative (subject to change).

1.1 Technical Specifications

1.1.1 Vision

Display type	:	Plasma
Screen size	:	42” (107 cm), 16:9
Resolution (HxV pixels)	:	1024x768 (42”)
Dyn. contrast ratio	:	15000:1
Min. light output (cd/m^2)	:	1500
Typ. response time (ms)	:	< 3
Viewing angle (HxV degrees)	:	160x160
Tuning system	:	PLL
Presets/channels	:	100 presets
Tuner bands	:	VHF, UHF, S, H
TV Colour systems	:	PAL B/G, D/K, I
	:	SECAM B/G, D/K, L/L’
Video playback	:	NTSC
	:	PAL
	:	SECAM
Supported computer formats	:	640x480 (@ 60, 72, 75, 85 Hz)
	:	800x600 (@ 60, 72, 75, 85 Hz)
	:	1024x768 (@ 60, 72, 75, 85 Hz)
Supported video formats	:	640x480i - 1fH
	:	720x576i - 1fH
	:	640x480p - 2fH
	:	720x576p - 2fH
	:	1920x1080i - 2fH
	:	1280x720p - 3fH

1.1.2 Sound

Sound systems	:	2CS B/G, D/K
	:	NICAM B/G, D/K, I, L
Maximum power (W_{RMS})	:	2 x 10

1.1.3 Miscellaneous

Power supply:

- Mains voltage (V_{AC})	:	220 - 240
- Mains frequency (Hz)	:	50 / 60

Ambient conditions:

- Temperature range (°C)	:	+5 to +40
- Maximum humidity	:	90% R.H.

Power consumption (values are indicative)

- Normal operation (W)	:	≈ 250 (42”)
- Stand-by (W)	:	< 1

Dimensions (WxHxD cm)	:	104.7x70.1x10.7
Weight (kg)	:	31.5 (excl. stand)
	:	41.5 (incl. stand)

1.2 Connection Overview

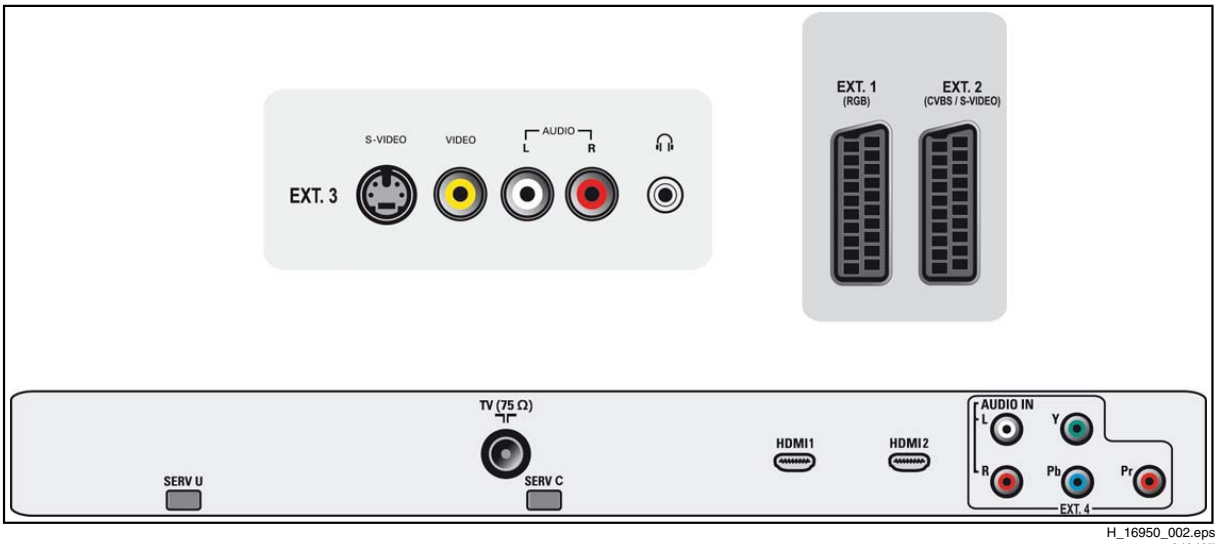

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Figure 1-1 Side and rear I/O connections

Note: The following connector colour abbreviations are used (acc. to DIN/IEC 757): Bk= Black, Bu= Blue, Gn= Green, Gy= Grey, Rd= Red, Wh= White, and Ye= Yellow.

1.2.1 Side Connections

EXT3: S-Video (Hosiden): Video Y/C - In

1	- Ground Y	Gnd	⏚
2	- Ground C	Gnd	⏚
3	- Video Y	1 V_{PP} / 75 ohm	⊕
4	- Video C	0.3 V_{PP}P / 75 ohm	⊕

EXT3: Cinch: Video CVBS - In, Audio - In

Rd	- Audio R	0.5 V_{RMS} / 10 kohm	⊕◎
Wh	- Audio L	0.5 V_{RMS} / 10 kohm	⊕◎
Ye	- Video CVBS	1 V_{PP} / 75 ohm	⊕◎

EXT3: Head phone - Out

Bk	- Head phone	32 - 600 ohm / 10 mW	6.3mm

1.2.2 Rear Connections

EXT1: Video RGB - In, CVBS - In/Out, Audio - In/Out

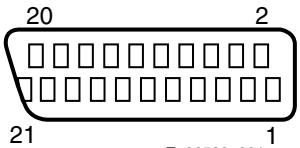

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Figure 1-2 SCART connector

1	- Audio R	0.5 V_{RMS} / 1 kohm	⊖
2	- Audio R	0.5 V_{RMS} / 10 kohm	⊕
3	- Audio L	0.5 V_{RMS} / 1 kohm	⊖
4	- Ground Audio	Gnd	⏚
5	- Ground Blue	Gnd	⏚
6	- Audio L	0.5 V_{RMS} / 10 kohm	⊕
7	- Video Blue	0.7 V_{PP} / 75 ohm	⊕
8	- Function Select	0 - 2 V: INT	
		4.5 - 7 V: EXT 16:9	
		9.5 - 12 V: EXT 4:3	⊕
9	- Ground Green	Gnd	⏚
10	- Easylink P50	0 - 5 V / 4.7 kohm	⊕⊖
11	- Video Green	0.7 V_{PP} / 75 ohm	⊕
12	- n.c.		
13	- Ground Red	Gnd	⏚
14	- Ground P50	Gnd	⏚
15	- Video Red	0.7 V_{PP} / 75 ohm	⊕
16	- Status/FBL	0 - 0.4 V: INT	
		1 - 3 V: EXT / 75 ohm	⊕
17	- Ground Video	Gnd	⏚
18	- Ground FBL	Gnd	⏚
19	- Video CVBS	1 V_{PP} / 75 ohm	⊖
20	- Video CVBS	1 V_{PP} / 75 ohm	⊕
21	- Shield	Gnd	⏚

EXT2: Video YC - In, CVBS - In/Out, Audio - In/Out

1	- Audio R	0.5 V_{RMS} / 1 kohm	⊖
2	- Audio R	0.5 V_{RMS} / 10 kohm	⊕
3	- Audio L	0.5 V_{RMS} / 1 kohm	⊖
4	- Ground Audio	Gnd	⏚
5	- n.c.		
6	- Audio L	0.5 V_{RMS} / 10 kohm	⊕
7	- C-out	0.7 V_{PP} / 75 ohm	⊖
8	- Function Select	0 - 2 V: INT	
		4.5 - 7 V: EXT 16:9	
		9.5 - 12 V: EXT 4:3	⊕
9	- n.c.		
10	- Easylink P50	0 - 5 V / 4.7 kohm	⊕⊖
11	- n.c.		
12	- n.c.		
13	- n.c.		
14	- Ground P50	Gnd	⏚
15	- C	0.7 V_{PP} / 75 ohm	⊕
16	- Status/FBL	0 - 0.4 V: INT	
		1 - 3 V: EXT / 75 ohm	⊕
17	- Ground Video	Gnd	⏚
18	- Ground FBL	Gnd	⏚
19	- Video CVBS	1 V_{PP} / 75 ohm	⊖
20	- Video CVBS/Y	1 V_{PP} / 75 ohm	⊕
21	- Shield	Gnd	⏚

Service Connector (UART)

1	- UART_TX	Transmit	⊖
2	- Ground	Gnd	⏚
3	- UART_RX	Receive	⊕

Aerial - In

-	- IEC-type (EU)	Coax, 75 ohm	

Service Connector (ComPair)

1	- SDA-S	I^2C Data (0 - 5 V)	
2	- SCL-S	I^2C Clock (0 - 5 V)	
3	- Ground	Gnd	

HDMI 1 & 2: Digital Video, Digital Audio - In

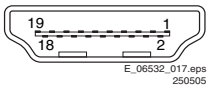

Figure 1-3 HDMI (type A) connector

1	- D2+	Data channel	
2	- Shield	Gnd	
3	- D2-	Data channel	
4	- D1+	Data channel	
5	- Shield	Gnd	
6	- D1-	Data channel	
7	- D0+	Data channel	
8	- Shield	Gnd	
9	- D0-	Data channel	
10	- CLK+	Data channel	
11	- Shield	Gnd	
12	- CLK-	Data channel	
13	- n.c.		
14	- n.c.		
15	- DDC_SCL	DDC clock	
16	- DDC_SDA	DDC data	
17	- Ground	Gnd	
18	- +5V		
19	- HPD	Hot Plug Detect	
20	- Ground	Gnd	

EXT4: Cinch: Video YPbPr - In, Audio - In

Gn	- Video Y	1 V_{PP} / 75 ohm	
Bu	- Video Pb	0.7 V_{PP} / 75 ohm	
Rd	- Video Pr	0.7 V_{PP} / 75 ohm	
Wh	- Audio L	0.5 V_{RMS} / 10 kohm	
Rd	- Audio R	0.5 V_{RMS} / 10 kohm	

1.3 Chassis Overview

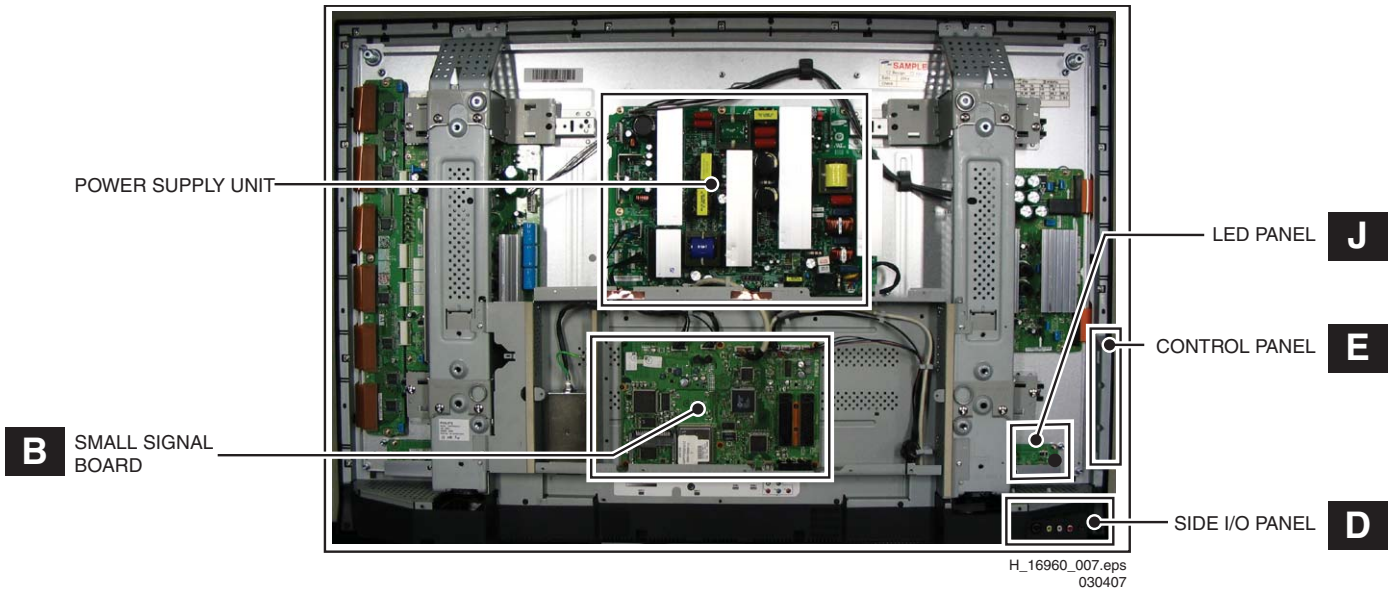

Figure 1-4 PWB/CBA locations

2. Safety Instructions, Warnings, and Notes

Index of this chapter:

2.1 Safety Instructions

Safety regulations require the following **during** a repair:

- Connect the set to the Mains/AC Power via an isolation transformer (> 800 VA).
- Replace safety components, indicated by the symbol ⚠, only by components identical to the original ones. Any other component substitution (other than original type) may increase risk of fire or electrical shock hazard.

Safety regulations require that **after** a repair, the set must be returned in its original condition. Pay in particular attention to the following points:

- Route the wire trees correctly and fix them with the mounted cable clamps.
- Check the insulation of the Mains/AC Power lead for external damage.
- Check the strain relief of the Mains/AC Power cord for proper function.
- Check the electrical DC resistance between the Mains/AC Power plug and the secondary side (only for sets that have a Mains/AC Power isolated power supply):
  1. Unplug the Mains/AC Power cord and connect a wire between the two pins of the Mains/AC Power plug.
  2. Set the Mains/AC Power switch to the "on" position (keep the Mains/AC Power cord unplugged!).
  3. Measure the resistance value between the pins of the Mains/AC Power plug and the metal shielding of the tuner or the aerial connection on the set. The reading should be between 4.5 Mohm and 12 Mohm.
  4. Switch "off" the set, and remove the wire between the two pins of the Mains/AC Power plug.
- Check the cabinet for defects, to prevent touching of any inner parts by the customer.

2.2 Warnings

- All ICs and many other semiconductors are susceptible to electrostatic discharges (ESD ⚠). Careless handling during repair can reduce life drastically. Make sure that, during repair, you are connected with the same potential as the mass of the set by a wristband with resistance. Keep components and tools also at this same potential.
- Be careful during measurements in the high voltage section.
- Never replace modules or other components while the unit is switched "on".
- When you align the set, use plastic rather than metal tools. This will prevent any short circuits and the danger of a circuit becoming unstable.

2.3 Notes

2.3.1 General

- Measure the voltages and waveforms with regard to the chassis (= tuner) ground (⏚), or hot ground (⏚), depending on the tested area of circuitry. The voltages and waveforms shown in the diagrams are indicative. Measure them in the Service Default Mode (see chapter 5) with a colour bar signal and stereo sound (L: 3 kHz, R: 1 kHz unless stated otherwise) and picture carrier at 475.25 MHz for PAL, or 61.25 MHz for NTSC (channel 3).
- Where necessary, measure the waveforms and voltages with (⊓) and without (⊼) aerial signal. Measure the voltages in the power supply section both in normal operation (⏻) and in stand-by (⏻). These values are indicated by means of the appropriate symbols.
- Manufactured under license from Dolby Laboratories. “Dolby”, “Pro Logic” and the “double-D symbol”, are trademarks of Dolby Laboratories.

2.3.2 Schematic Notes

- All resistor values are in ohms, and the value multiplier is often used to indicate the decimal point location (e.g. 2K2 indicates 2.2 kohm).
- Resistor values with no multiplier may be indicated with either an "E" or an "R" (e.g. 220E or 220R indicates 220 ohm).
- All capacitor values are given in micro-farads (μ= x10^{-6}), nano-farads (n= x10^{-9}), or pico-farads (p= x10^{-12}).
- Capacitor values may also use the value multiplier as the decimal point indication (e.g. 2p2 indicates 2.2 pF).
- An "asterisk" (*) indicates component usage varies. Refer to the diversity tables for the correct values.
- The correct component values are listed in the Spare Parts List. Therefore, always check this list when there is any doubt.

2.3.3 BGA (Ball Grid Array) ICs

Introduction

For more information on how to handle BGA devices, visit this URL: *www.atyourservice.ce.philips.com* (needs subscription, not available for all regions). After login, select “Magazine”, then go to “Repair downloads”. Here you will find Information on how to deal with BGA-ICs.

BGA Temperature Profiles

For BGA-ICs, you **must** use the correct temperature-profile, which is coupled to the 12NC. For an overview of these profiles, visit the website *www.atyourservice.ce.philips.com* (needs subscription, but is not available for all regions)
You will find this and more technical information within the "Magazine", chapter "Repair downloads".
For additional questions please contact your local repair help desk.

2.3.4 Lead-free Soldering

Due to lead-free technology some rules have to be respected by the workshop during a repair:

- Use only lead-free soldering tin Philips SAC305 with order code 0622 149 00106. If lead-free solder paste is required, please contact the manufacturer of your soldering equipment. In general, use of solder paste within workshops should be avoided because paste is not easy to store and to handle.
- Use only adequate solder tools applicable for lead-free soldering tin. The solder tool must be able:
  - To reach a solder-tip temperature of at least 400°C.
  - To stabilize the adjusted temperature at the solder-tip.
  - To exchange solder-tips for different applications.
- Adjust your solder tool so that a temperature of around 360°C - 380°C is reached and stabilized at the solder joint. Heating time of the solder-joint should not exceed ~ 4 sec. Avoid temperatures above 400°C, otherwise wear-out of tips will increase drastically and flux-fluid will be destroyed. To avoid wear-out of tips, switch “off” unused equipment or reduce heat.
- Mix of lead-free soldering tin/parts with leaded soldering tin/parts is possible but PHILIPS recommends strongly **to**

avoid mixed regimes. If this cannot be avoided, carefully clear the solder-joint from old tin and re-solder with new tin.

2.3.5 Alternative BOM identification

The **third digit** in the serial number (example: AG**2**B0335000001) indicates the number of the alternative B.O.M. (Bill Of Materials) that has been used for producing the specific TV set. In general, it is possible that the same TV model on the market is produced with e.g. two different types of displays, coming from two different suppliers. This will then result in sets which have the same CTN (Commercial Type Number; e.g. 28PW9515/12) but which have a different B.O.M. number.
By looking at the third digit of the serial number, one can identify which B.O.M. is used for the TV set he is working with. If the third digit of the serial number contains the number “1” (example: AG**1**B033500001), then the TV set has been manufactured according to B.O.M. number 1. If the third digit is a “2” (example: AG**2**B0335000001), then the set has been produced according to B.O.M. no. 2. ***This is important for ordering the correct spare parts!***
For the third digit, the numbers 1...9 and the characters A...Z can be used, so in total: 9 plus 26= 35 different B.O.M.s can be indicated by the third digit of the serial number.

Identification: The bottom line of a type plate gives a 14-digit serial number. Digits 1 and 2 refer to the production centre (e.g. AG is Bruges), digit 3 refers to the B.O.M. code, digit 4 refers to the Service version change code, digits 5 and 6 refer to the production year, and digits 7 and 8 refer to production week (in example below it is 2006 week 17). The 6 last digits contain the serial number.

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Figure 2-1 Serial number (example)

2.3.6 Exchanging a Defective PDP

If a PDP has defective or "dead" pixels, do the following:
1. Locate the defective pixels.
2. Indicate their positions by means of a marker (with erasable ink!).
3. Indicate the positions of the defective pixels in the Defects Description Form (DDF), which is published in the PDP manuals.
4. After this, remove the PDP and return it to your Service organisation.

If a PDP has to be removed from the TV set, always keep in mind that the PDP parts can easily be damaged by ESD, so take the following protective measures:
- Do not damage the flex foils (they are located on the left, right, upper and lower sides of the PDP).
- Do not scratch the glass plate.
- Avoid fingerprints.

2.3.7 Board Level Repair (BLR) or Component Level Repair (CLR)

If a board is defective, consult your repair procedure to decide if the board has to be exchanged or if it should be repaired on component level.
If your repair procedure says the board should be exchanged completely, do not solder on the defective board. Otherwise, it cannot be returned to the O.E.M. supplier for back charging!

2.3.8 Practical Service Precautions

- **It makes sense to avoid exposure to electrical shock.** While some sources are expected to have a possible dangerous impact, others of quite high potential are of limited current and are sometimes held in less regard.
- **Always respect voltages**. While some may not be dangerous in themselves, they can cause unexpected reactions that are best avoided. Before reaching into a powered TV set, it is best to test the high voltage insulation. It is easy to do, and is a good service precaution.

3. Directions for Use

You can download this information from the following websites:
http://www.philips.com/support
http://www.p4c.philips.com

4. Mechanical Instructions

Index of this chapter:

Notes:

- Several models in this chassis range have a different mechanical construction, the instructions given in this chapter are therefore very model specific.
- Follow the disassembly instructions in described order.

4.1 Cable Dressing

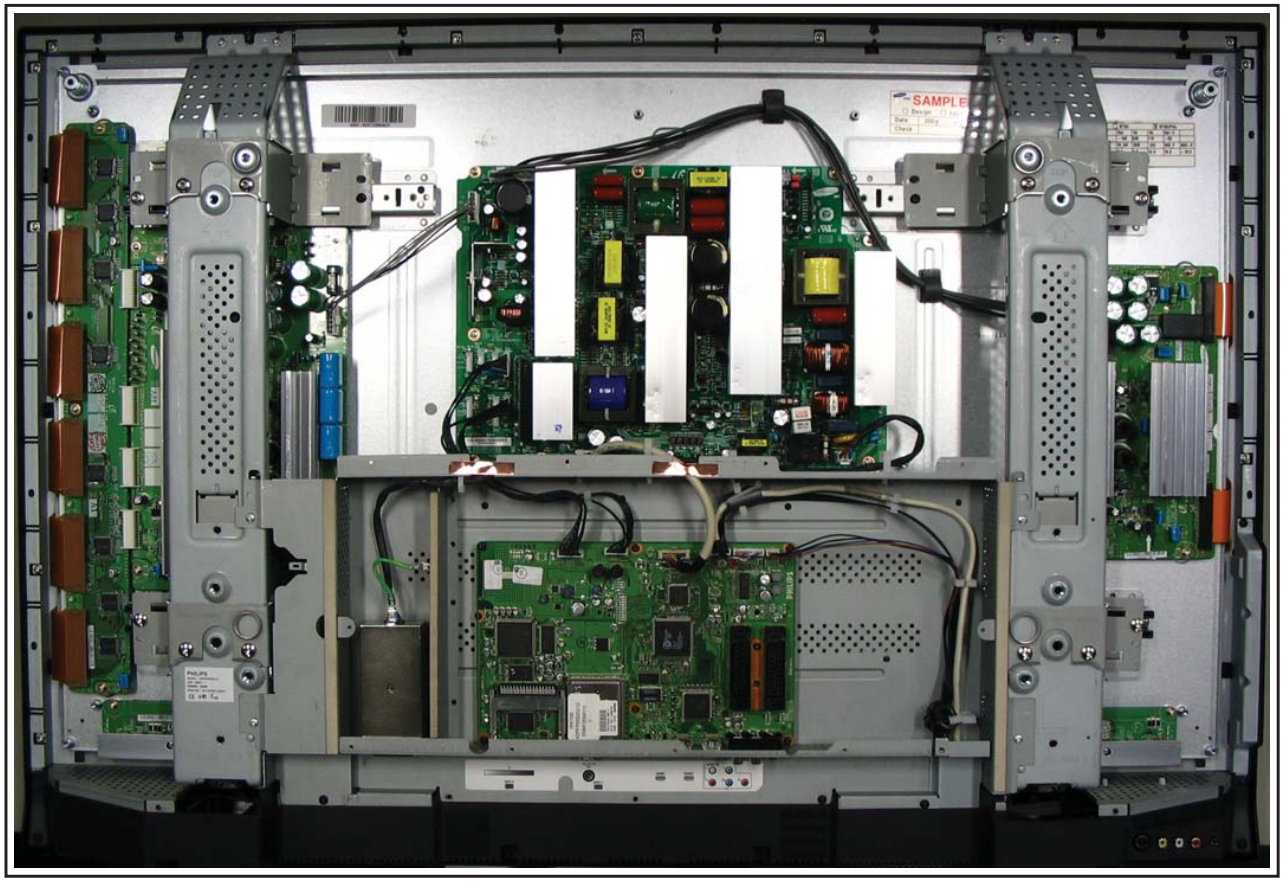

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Figure 4-1 Cable dressing

4.2 Service Positions

For easy servicing of this set, there are a few possibilities created:

- The buffers from the packaging.
- Foam bars (created for Service).
- Aluminium service stands (created for Service).

4.2.1 Foam Bars

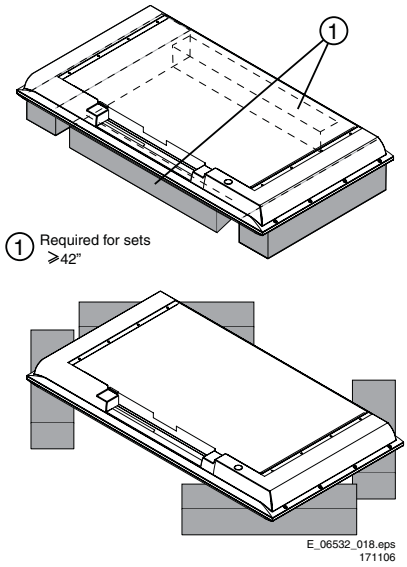

Figure 4-2 Foam bars

The foam bars (order code 3122 785 90580 for two pieces) can be used for all types and sizes of Flat TVs. See figure “Foam bars” for details. Sets with a display of 42” and larger, require **four** foam bars [1]. Ensure that the foam bars are always supporting the cabinet and **never** only the display.
Caution: Failure to follow these guidelines can seriously damage the display!
By laying the TV face down on the (ESD protective) foam bars, a stable situation is created to perform measurements and alignments. By placing a mirror under the TV, you can monitor the screen.

4.2.2 Aluminium Stands

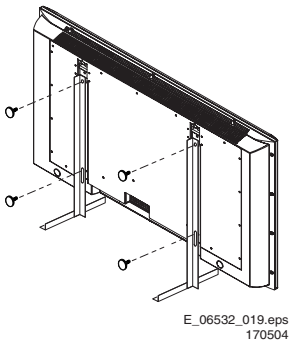

Figure 4-3 Aluminium stands (drawing of MkI)

The new MkII aluminium stands (not on drawing) with order code 3122 785 90690, can also be used to do measurements, alignments, and duration tests. The stands can be (dis)mounted quick and easy by means of sliding them in/out the "mushrooms" (not valid for all models!). The new stands are backwards compatible with the earlier models.
Important: For (older) FTV sets without these "mushrooms", it is obligatory to use the provided screws, otherwise it is possible to damage the monitor inside!

4.3 Assy/Panel Removal

4.3.1 Rear Cover

Warning: Disconnect the mains power cord before you remove the rear cover.

1. Place the TV set upside down on a table top, using the foam bars (see part “Service Positions”).
2. Remove the stand (if present).
3. Remove T10 Parker screws [1].
4. Remove T10 Tapping screws [2].
5. Remove “mushrooms” [3] and lift the rear cover.

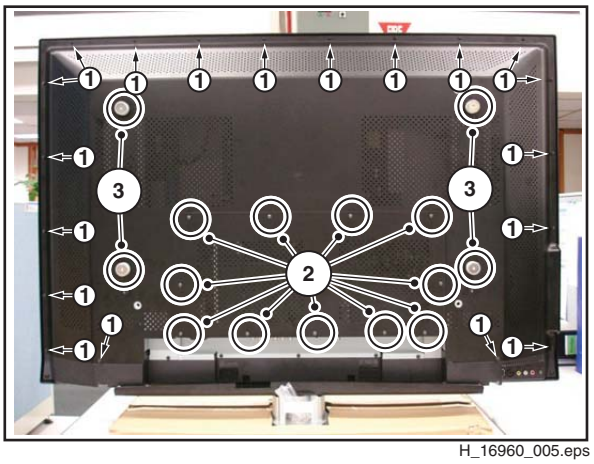

Figure 4-4 Rear cover removal

4.3.2 Speaker Cover

1. Remove T10 Parker screws [1].
2. Twist [2] and lift the speaker cover as shown.
3. Now you have access to the speakers, Side I/O panel, IR/LED panel.

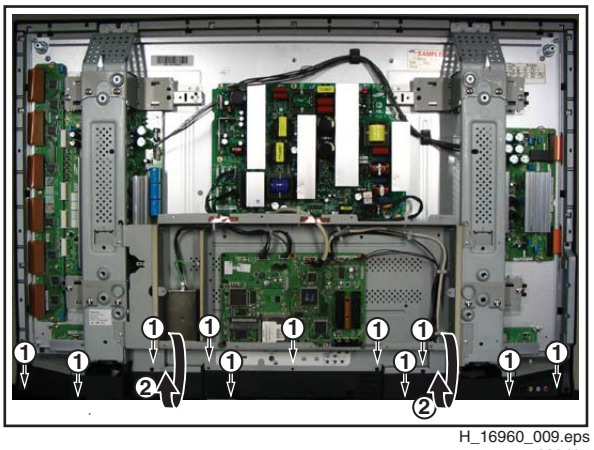

Figure 4-5 Speaker cover removal

4.3.3 Keyboard Control Panel [E]

1. Refer to next fig. “Keyboard control panel“.
2. Remove the T10 Parker screws [1] from the shielding.
3. Remove the shielding.
4. Remove the T10 Parker screws [2] from the bracket.
5. Remove the unit.
6. Unplug connector(s).

When defective, replace the whole unit.

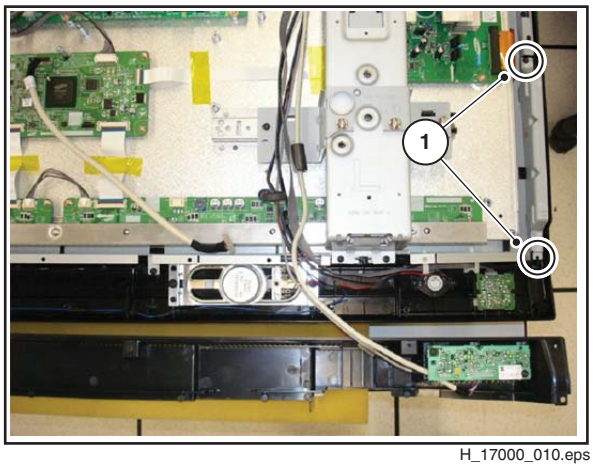

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Figure 4-6 Keyboard control panel [1/2]

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260207

Figure 4-7 Keyboard control panel [2/2]

4.3.4 Side I/O Panel [D]

1. Remove the bottom “speaker cover”, as described earlier.
2. Refer to next fig. “Side I/O and IR/LED panel“.
3. Remove T10 Parker screws [1] and take out the panel.

When defective, replace the whole unit.

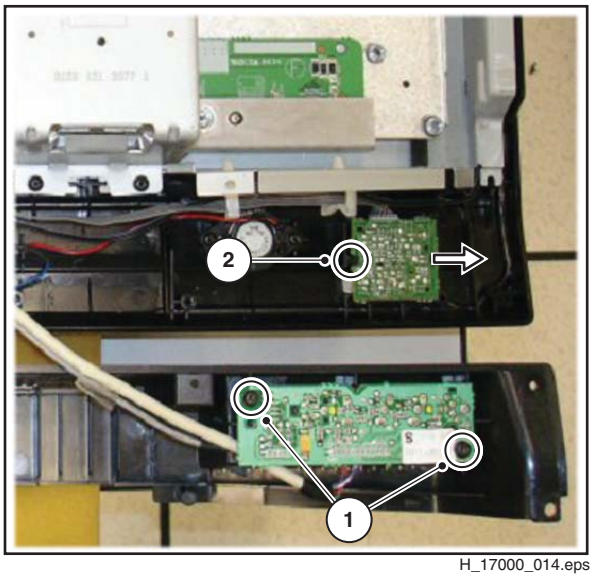

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Figure 4-8 Side I/O and IR/LED panel

4.3.5 IR/LED Panel [J]

1. Remove the bottom “speaker cover”, as described earlier.
2. Refer to earlier fig. “Side I/O and IR/LED panel“.
3. Release clip [2] and remove the board.
4. Unplug connector(s).

When defective, replace the whole unit.

4.3.6 Speakers

1. Remove the bottom “speaker cover”, as described earlier.
2. Refer to fig. “Speakers“ below.
3. Unplug connectors.
4. Remove T10 Parker screws [1] and [2].
5. Take out the speaker(s).

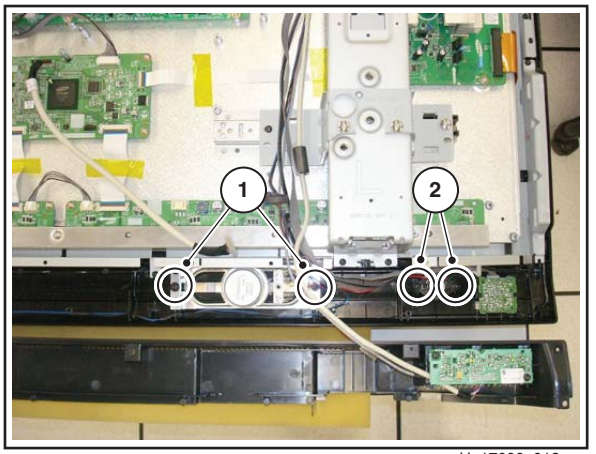

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Figure 4-9 Speakers

4.3.7 Power Supply Board

The PSU belongs to the PDP panel. Please refer to the PDP repair manual for more info (info on front page).

4.3.8 Small Signal Board [B]

1. Unplug all connectors. Carefully unplug the LVDS connector as it is very fragile.
2. Remove the T10 tapping screws [1].
3. Remove the T10 parker screws [2].
4. Take out the panel.

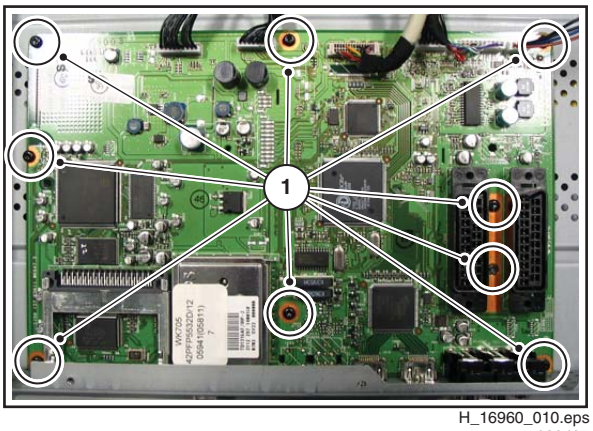

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Figure 4-10 Small Signal Board -1-

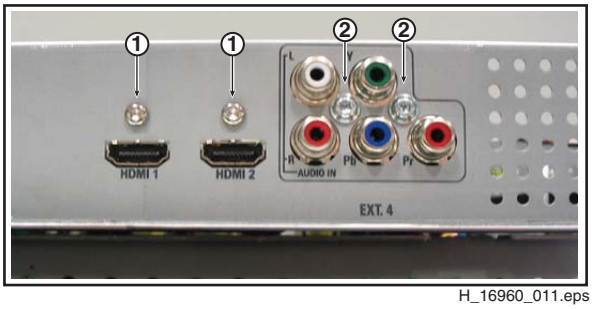

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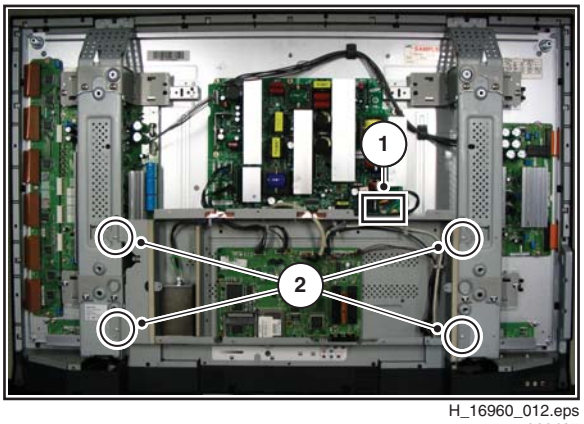
Figure 4-11 Small Signal Board -2-

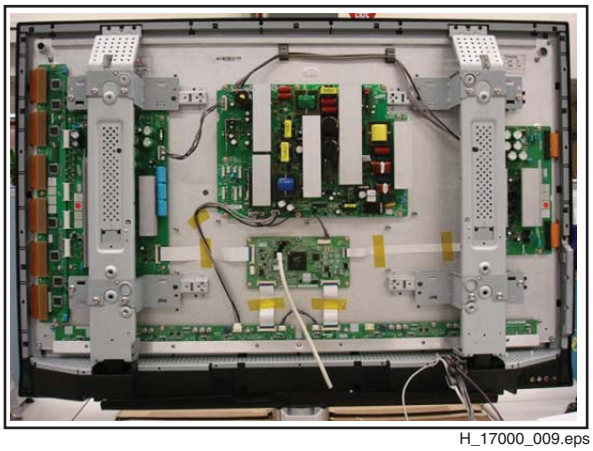
4.3.9 PDP Panel

1. Refer to next figures.
2. Remove the bottom “speaker cover”, as earlier described.
3. Unplug mains cable from PDP Power Supply Unit [1].
4. Unplug all connectors to/from the panels inside the “SSB tray”. Pay attention to the LVDS connector.
5. Remove screws [2], and remove the metal “SSB tray” (incl. panels) from the set.
6. You now view the PDP boards, as shown in fig. “PDP panel [2/3]“.
7. Remove fixation screws [3] and lift the complete PDP (incl. the boards and wiring) by means of the mounting brackets [4] from the set. Note: Remove these brackets [4] before returning the defective PDP.



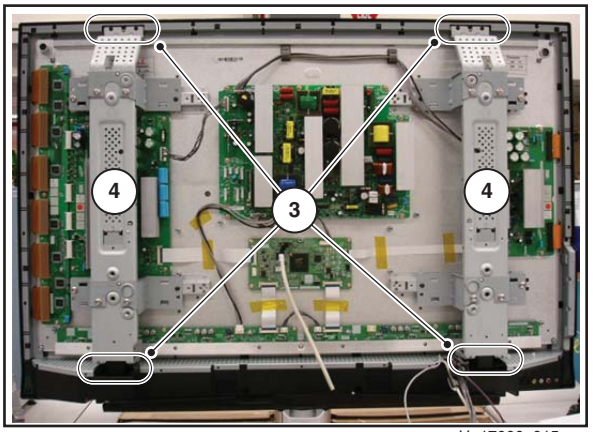
H_16960_012.eps
060407

Figure 4-12 PDP panel [1/3]



H_17000_009.eps
260207

Figure 4-13 PDP panel [2/3]

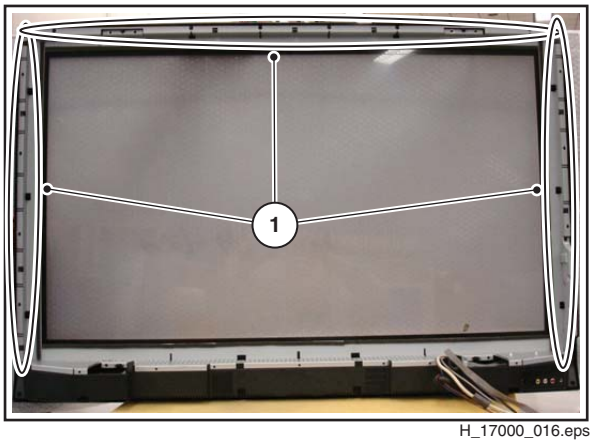


H_17000_015.eps
280207

Figure 4-14 PDP panel [3/3]

4.3.10 Glass Plate

1. Refer to figures “Glass plate“ below.
2. Remove T10 Parker screws [1] along the side of the glass plate, and remove the metal fixation brackets.
3. Lift the glass plate form the set.



H_17000_016.eps
280207

Figure 4-15 Glass plate

4.4 Set Re-assembly

To re-assemble the whole set, execute all processes in reverse order.

Notes:

- While re-assembling, make sure that all cables are placed and connected in their original position. See figure "Cable dressing".
- Pay special attention not to damage the EMC foams. Ensure that EMC foams are mounted correctly.

5. Service Modes, Error Codes, and Fault Finding

Index of this chapter:

5.1 Test Points

In the chassis schematics and layout overviews, the test points (Fxxx) are mentioned. In the schematics, test points are indicated with a rectangular box around “Fxxx” or “Ixxx”, in the layout overviews with a “half-moon” sign.
As most signals are digital, it will be difficult to measure waveforms with a standard oscilloscope. Several key ICs are capable of generating test patterns, which can be controlled via ComPair. In this way it is possible to determine which part is defective.

Perform measurements under the following conditions:
- Service Default Mode.
- Video: Colour bar signal.
- Audio: 3 kHz left, 1 kHz right.

5.2 Service Modes

The Service Mode feature is split into four parts:
- Service Default Mode (SDM).
- Service Alignment Mode (SAM).
- Customer Service Mode (CSM).
- Computer Aided Repair Mode (ComPair).

SDM and SAM offer features, which can be used by the Service engineer to repair/align a TV set. Some features are:
- A pre-defined situation to ensure measurements can be made under uniform conditions (SDM).
- Activates the blinking LED procedure for error identification when no picture is available (SDM).
- The possibility to overrule software protections when SDM was entered via the Service pins.
- Make alignments (e.g. white tone), (de)select options, enter options codes, reset the error buffer (SAM).
- Display information (“SDM” or “SAM” indication in upper right corner of screen, error buffer, software version, operating hours, options and option codes, sub menus).

The CSM is a Service Mode that can be enabled by the consumer. The CSM displays diagnosis information, which the customer can forward to the dealer or call centre. In CSM mode, “CSM”, is displayed in the top right corner of the screen. The information provided in CSM and the purpose of CSM is to:
- Increase the home repair hit rate.
- Decrease the number of nuisance calls.
- Solved customers' problem without home visit.

ComPair Mode is used for communication between a computer and a TV on I2C /UART level and can be used by a Service engineer to quickly diagnose the TV set by reading out error codes, read and write in NVMs, communicate with ICs and the uP (PWM, registers, etc.), and by making use of a fault finding database. It will also be possible to up and download the software of the TV set via I2C with help of ComPair. To do this, ComPair has to be connected to the TV set via the ComPair connector, which will be accessible through the rear of the set (without removing the rear cover).

In case a call centre or consumer reads “See Type Plate” in CSM mode, he needs to look to the side/bottom sticker to identify the set, for further actions.

5.2.1 General

Some items are applicable to all Service Modes or are general. These are listed below.

Life Timer
During the life time cycle of the TV set, a timer is kept. It counts the normal operation hours (not the Stand-by hours). The actual value of the timer is displayed in SDM and CSM in a decimal value. Every two soft-resets increase the hour by +1.

Software Identification, Version, and Cluster
The software ID, version, and cluster will be shown in the main menu display of SDM, SAM, and CSM.
The screen will show: “**AAAABCD X.YY**”, where:
- **AAAA** is the chassis name: LC71 for analogue range (non-DVB), LC72 for digital range (DVB).
- **B** is the region indication: E= Europe, A= AP/China, U= NAFTA, L= LATAM.
- **C** is the display indication: L= LCD, P= Plasma.
- **D** is the language/feature indication: 1= standard, H= 1080p full HD.
- **X** is the main version number: this is updated with a major change of specification (incompatible with the previous software version). Numbering will go from 1 - 9 and A - Z.
  - If the main version number changes, the new version number is written in the NVM.
  - If the main version number changes, the default settings are loaded.
- **YY** is the sub version number: this is updated with a minor change (backwards compatible with the previous versions) Numbering will go from 00 - 99.
  - If the sub version number changes, the new version number is written in the NVM.
  - If the NVM is fresh, the software identification, version, and cluster will be written to NVM.

Display Option Code Selection
When after an SSB or display exchange, the display option code is not set properly, it will result in a TV with “no display”. Therefore, **it is required** to set this display option code after such a repair.
To do so, press the following key sequence on a standard RC transmitter: “**062598**” directly followed by **MENU** and “**xxx**”, where “xxx” is a 3 digit decimal value of the panel type: see column “Panel Code (Dec)” in table “Option codes OP1 ...OP7 (for all LC7.2E models)” in chapter 8 “Alignments”, or see sticker on the side/bottom of the cabinet. When the value is accepted and stored in NVM, the set will switch to Stand-by, to indicate that the process has been completed.

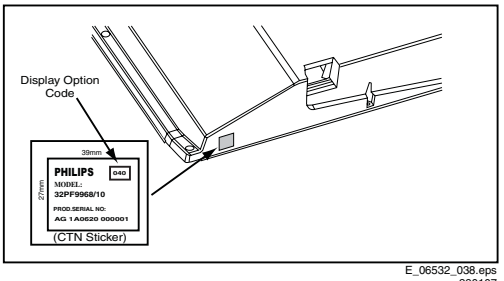


Figure 5-1 Location of Display Option Code sticker

During this algorithm, the NVM-content must be filtered, because several items in the NVM are TV-related and not SSB-related (e.g. Model and Prod. S/N). Therefore, “Model” and “Prod. S/N” data is changed into “See Type Plate”.

5.2.2 Service Default Mode (SDM)

Purpose

Set the TV in SDM mode in order to be able to:

- Create a pre-defined setting for measurements to be made.
- Override software protections.
- Start the blinking LED procedure.
- Read the error buffer.
- Check the life timer.

Specifications

Table 5-1 SDM default settings

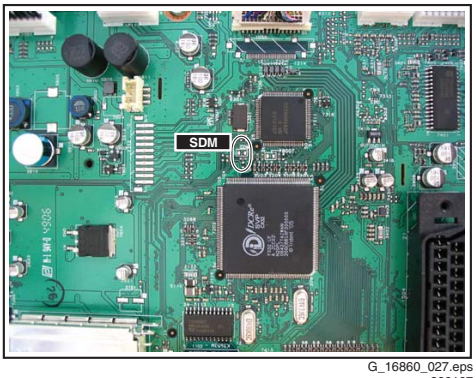
Region	Freq. (MHz)	Default syst.
Europe (except France), AP-PAL/-Multi	475.25	PAL B/G
France		SECAM L
NAFTA, AP-NTSC	61.25 (channel 3)	NTSC M
LATAM		PAL M

- Set linear video and audio settings to 50%, but volume to 25%. Stored user settings are not affected.
- All service-unfriendly modes (if present) are disabled, since they interfere with diagnosing/repairing a set. These service unfriendly modes are:
  - (Sleep) timer.
  - Blue mute/Wall paper.
  - Auto switch “off” (when there is no “ident” signal).
  - Hotel or hospital mode.
  - Child lock or parental lock (manual or via V-chip).
  - Skipping, blanking of “Not favourite”, “Skipped” or “Locked” presets/channels.
  - Automatic storing of Personal Preset or Last Status settings.
  - Automatic user menu time-out (menu switches back/ OFF automatically.
  - Auto Volume levelling (AVL).

How to Activate

To activate SDM, use **one** of the following methods:

- Press the following key sequence on the remote control transmitter: “**062596**” directly followed by the **MENU** button (do not allow the display to time out between entries while keying the sequence).
- Short one of the “Service” jumpers on the TV board during cold start (see Figures “Service jumper”). Then press the mains button (remove the short after start-up).
  Caution: Activating SDM by shorting “Service” jumpers will override the DC speaker protection (error 1), the General I2C error (error 4), and the Trident video processor error (error 5). When doing this, the service-technician must know exactly what he is doing, as it could damage the television set.

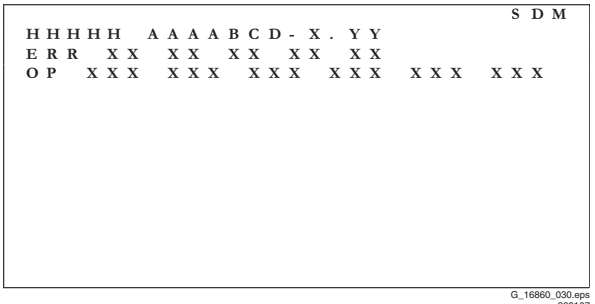


G_16860_027.eps
260107

Figure 5-2 Service jumper (SSB component side)

On Screen

After activating SDM, the following screen is visible, with SDM in the upper right corner of the screen to indicate that the television is in Service Default Mode.



G_16860_030.eps
260107

Figure 5-3 SDM menu

Menu explanation:

- **HHHHH**: Are the operating hours (in decimal).
- **AAAABCD-X.YY**: See paragraph “Service Modes” -> “General” -> “Software Identification, Version, and Cluster” for the SW name definition.
- **SDM**: The character “SDM” to indicate that the TV set is in Service mode.
- **ERR**: Shows all errors detected since the last time the buffer was erased. Five errors possible.
- **OP**: Used to read-out the option bytes. See “Options” in the Alignments section for a detailed description. Seven codes are possible.

How to Navigate

As this mode is read only, there is not much to navigate. To switch to other modes, use one of the following methods:

- Command MENU from the user remote will enter the normal user menu (brightness, contrast, colour, etc...) with “SDM” OSD remaining, and pressing MENU key again will return to the last status of SDM again.
- To prevent the OSD from interfering with measurements in SDM, command “OSD” (“STATUS” for NAFTA and LATAM) from the user remote will toggle the OSD “on/off” with “SDM” OSD remaining always “on”.
- Press the following key sequence on the remote control transmitter: “**062596**” directly followed by the **OSD/i+** button to switch to SAM (do not allow the display to time out between entries while keying the sequence).

How to Exit

Switch the set to STANDBY by pressing the mains button on the remote control transmitter or on the television set.
If you switch the television set “off” by removing the mains (i.e., unplugging the television), the television set will remain in SDM when mains is re-applied, and the error buffer is not cleared. The error buffer will only be cleared when the “clear” command is used in the SAM menu.

Note:

- If the TV is switched “off” by a power interrupt while in SDM, the TV will show up in the last status of SDM menu as soon as the power is supplied again. The error buffer will not be cleared.
- In case the set is in Factory mode by accident (with “F” displayed on screen), by pressing and hold “VOL-“ and “CH-” together should leave Factory mode.

5.2.3 Service Alignment Mode (SAM)

Purpose
- To change option settings.
- To display / clear the error code buffer.
- To perform alignments.

Specifications
- Operation hours counter (maximum five digits displayed).
- Software version, error codes, and option settings display.
- Error buffer clearing.
- Option settings.
- Software alignments (Tuner, White Tone, and Audio).
- NVM Editor.
- ComPair Mode switching.
- Set the screen mode to full screen (all contents on screen are viewable).

How to Activate
To activate SAM, use one of the following methods:
- Press the following key sequence on the remote control transmitter: "**062596**" directly followed by the **OSD/ STATUS/INFO/i+** button (it depends on region which button is present on the RC). Do not allow the display to time out between entries while keying the sequence.
- Or via ComPair.

After entering SAM, the following screen is visible, with SAM in the upper right corner of the screen to indicate that the television is in Service Alignment Mode.

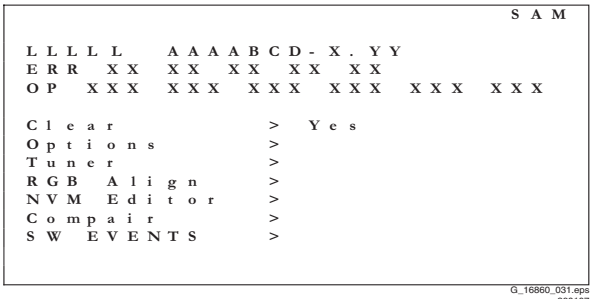


Figure 5-4 SAM menu

Menu explanation:
1. **LLLLL.** This represents the run timer. The run timer counts normal operation hours, but does not count Stand-by hours.
2. **AAAABCD-X.YY.** See paragraph "Service Modes" -> "General" -> "Software Identification, Version, and Cluster" for the SW name definition.
3. **SAM.** Indication of the Service Alignment Mode.
4. **ERR (ERRor buffer).** Shows all errors detected since the last time the buffer was erased. Five errors possible.
5. **OP (Option Bytes).** Used to read-out the option bytes. See "Options" in the Alignments section for a detailed description. Seven codes are possible.
6. **Clear.** Erases the contents of the error buffer. Select the CLEAR menu item and press the MENU RIGHT key. The content of the error buffer is cleared.
7. **Options.** Used to set the option bits. See "Options" in the "Alignments" chapter for a detailed description.
8. **Tuner.** Used to align the tuner. See "Tuner" in the "Alignments" chapter for a detailed description.
9. **RGB Align.** Used to align the White Tone. See "White Tone" in the "Alignments" chapter for a detailed description.
10. **NVM Editor.** Can be used to change the NVM data in the television set. See also paragraph "Fault Finding and Repair Tips" further on.
11. **ComPair.** Can be used to switch the television to "In Application Programming" mode (IAP), for software uploading via ComPair. Read paragraph "Service Tools" -> "ComPair". **Caution:** When this mode is selected without ComPair connected, the TV will be blocked. Remove the AC power to reset the TV.
12. **SW Events.** Only to be used by development to monitor SW behaviour during stress test.

How to Navigate
- In the SAM menu, select menu items with the MENU UP/ DOWN keys on the remote control transmitter. The selected item will be indicated. When not all menu items fit on the screen, use the MENU UP/DOWN keys to display the next / previous menu items.
- With the MENU LEFT/RIGHT keys, it is possible to:
  - Activate the selected menu item.
  - Change the value of the selected menu item.
  - Activate the selected sub menu.
- When you press the MENU button twice while in top level SAM, the set will switch to the normal user menu (with the SAM mode still active in the background). To return to the SAM menu press the MENU button.
- Command "OSD/i+" key from the user remote will toggle the OSD "on/off" with "SAM" OSD remaining always "on".
- Press the following key sequence on the remote control transmitter: "**062596**" directly followed by the **MENU** button to switch to SDM (do not allow the display to time out between entries while keying the sequence).

How to Store SAM Settings
To store the settings changed in SAM mode (except the OPTIONS settings), leave the top level SAM menu by using the POWER button on the remote control transmitter or the television set.

How to Exit
Switch the set to STANDBY by pressing the mains button on the remote control transmitter or the television set.

Note:
- When the TV is switched "off" by a power interrupt while in SAM, the TV will show up in "normal operation mode" as soon as the power is supplied again. The error buffer will not be cleared.
- In case the set is in Factory mode by accident (with "F" displayed on screen), by pressing and hold "VOL-" and "CH-" together should leave Factory mode.

5.2.4 Customer Service Mode (CSM)

Purpose
The Customer Service Mode shows error codes and information on the TV's operation settings. A call centre can instruct the customer (by telephone) to enter CSM in order to identify the status of the set. This helps them to diagnose problems and failures in the TV before making a service call. The CSM is a read-only mode; therefore, modifications are not possible in this mode.

Specifications
- Ignore "Service unfriendly modes".
- Line number for every line (to make CSM language independent).
- Set the screen mode to full screen (all contents on screen are viewable).
- After leaving the Customer Service Mode, the original settings are restored.
- Possibility to use "CH+" or "CH-" for channel surfing, or enter the specific channel number on the RC.

How to Activate
To activate CSM, press the following key sequence on the remote control transmitter: "**123654**" (do not allow the display to time out between entries while keying the sequence).

Upon entering the Customer Service Mode, the following screen will appear:

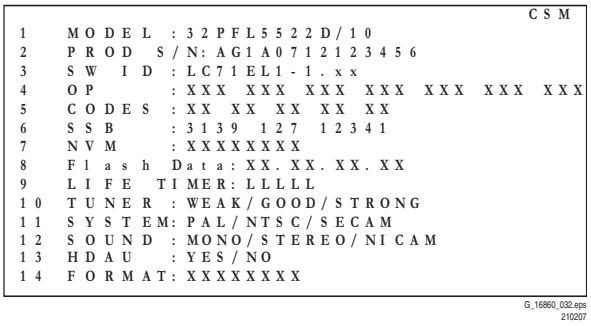


Figure 5-5 CSM menu (example)

Menu Explanation:

1. **MODEL.** Type number, e.g. 42PFL7662/12. (*)
2. **PROD S/N.** Product serial no., e.g. SV1A0701000008. (*)
3. **SW ID.** Software cluster and version is displayed.
4. **OP.** Option code information.
5. CODES. Error buffer contents.
6. **SSB.** Indication of the SSB factory ID (= 12nc). (*)
7. **NVM.** The NVM software version no.
8. **Flash Data.** PQ (picture quality) and AQ (audio quality) data version. This is a sub set of the main SW.
9. **LIFE TIMER.** Operating hours indication.
10. **TUNER.** Indicates the tuner signal condition: “Weak” when signal falls below threshold value, “Medium” when signal is at mid-range, and “Strong” when signal falls above threshold value.
11. **SYSTEM.** Gives information about the video system of the selected transmitter (PAL/SECAM/NTSC).
12. **SOUND.** Gives information about the audio system of the selected transmitter (MONO/STEREO/NICAM).
13. **HDAU.** HDMI audio stream detection. “YES” means audio stream detected. “NO” means no audio stream present. Only displayed when HDMI source is selected.
14. **FORMAT.** Gives information about the video format of the selected transmitter (480i/480p/720p/1080i).
15. **HD SW ID.** Software version of the 1080p full HD module (when present).
16. **Reserved.**
17. **Reserved.**
18. **Reserved.**

(*) If an NVM IC is replaced or initialised, the Model Number, Serial Number, and SSB Code Number must be re-written to the NVM. ComPair will foresee in a possibility to do this.

How to Exit

To exit CSM, use one of the following methods:

- Press the MENU button twice, or POWER button on the remote control transmitter.
- Press the POWER button on the television set.

5.3 Service Tools

5.3.1 ComPair

Introduction

ComPair (Computer Aided Repair) is a Service tool for Philips Consumer Electronics products. and offers the following:

1. ComPair helps you to quickly get an understanding on how to repair the chassis in a short and effective way.
2. ComPair allows very detailed diagnostics and is therefore capable of accurately indicating problem areas. You do not have to know anything about I2C or UART commands yourself, because ComPair takes care of this.
3. ComPair speeds up the repair time since it can automatically communicate with the chassis (when the uP is working) and all repair information is directly available.
4. ComPair features TV software upgrade possibilities.

Specifications

ComPair consists of a Windows based fault finding program and an interface box between PC and the (defective) product. The (new) ComPair II interface box is connected **to the PC** via an USB cable. For the TV chassis, the ComPair interface box and the TV communicate via a bi-directional cable via the service connector(s).
The ComPair fault finding program is able to determine the problem of the defective television, by a combination of automatic diagnostics and an interactive question/answer procedure.

How to Connect

This is described in the chassis fault finding database in ComPair.

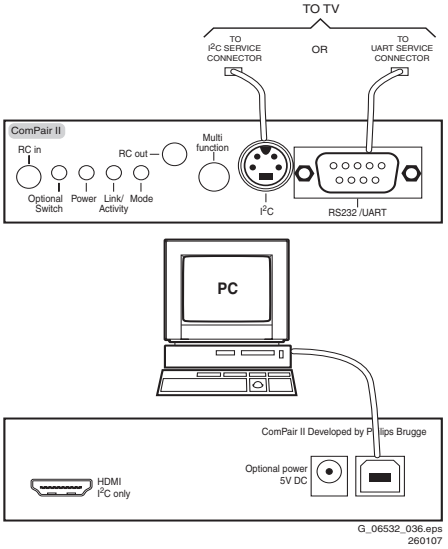


Figure 5-6 ComPair II interface connection

Caution: It is compulsory to connect the TV to the PC as shown in the picture above (with the ComPair interface in between), as the ComPair interface acts as a level shifter. If one connects the TV directly to the PC (via UART), ICs will be blown!

How to Order

ComPair II order codes:

- ComPair II interface: 3122 785 91020.
- ComPair32 CD (update): 3122 785 60160.
- ComPair interface cable: 3122 785 90004.
- ComPair interface extension cable: 3139 131 03791.
- ComPair UART interface cable: 3122 785 90630.

Note: If you encounter any problems, contact your local support desk

5.3.2 LVDS Tool

Introduction
This Service tool (also called "ComPair Assistant 1") may help you to identify, in case the TV does not show any picture, whether the Small Signal Board (SSB) **or** the display of a Flat TV is defective. Thus to determine if LVDS, RGB, and sync signals are okay.

When operating, the tool will show a small (scaled) picture on a VGA monitor. Due to a limited memory capacity, it is not possible to increase the size when processing high-resolution LVDS signals (> 1280x960). Below this resolution, or when a DVI monitor is used, the displayed picture will be full size.

How to Connect
Connections are explained in the user manual, which is packed with the tool. The LVDS cables included in the package cover most chassis. For some chassis, a separate cable must be ordered.

Note: To use the LVDS tool, you must have ComPair release 2004-1 (or later) on your PC (engine version >= 2.2.05).
For every TV type number and screen size, one must choose the proper settings via ComPair. The ComPair file will be updated regularly with new introduced chassis information.

How to Order
- LVDS tool (incl. two LVDS cables: 31p and 20p, covering chassis BJx, EJx, FJx and LC4.1): 3122 785 90671.
- LVDS tool Service Manual: 3122 785 00810.
- LVDS cable 20p/DF -> 20p/DF (standard with tool): 3122 785 90731.
- LVDS cable 31p/FI -> 31p/FI (standard with tool): 3122 785 90662.

For other chassis, a separate LVDS cable must be ordered. Refer to table "LVDS cable order number" for an overview of all available cables.

Table 5-2 LVDS cable order number

Chassis	LVDS cable order number	Remarks
BJ2.4	3122 785 90662 [1]	
BJ2.5	3122 785 90662 [1]	
BJ3.0	3122 785 90662 [1]	
BJ3.1	3122 785 90662 [1]	
EJ2.0	3122 785 90662 [1]	
EJ3.0	3122 785 90662 [1]	
EL1.1	3122 785 90662 [1] / 3122 785 90821	
FJ3.0	3122 785 90662 [1]	
FTL2.4	3122 785 90662 [1, 2]	
LC4.1	3122 785 90731 [1] / 3122 785 90851	
LC4.3	3122 785 90821	
LC4.31	3122 785 90821	
LC4.41	3122 785 90662 [1, 2] / 3122 785 90851	Only for 26 & 32" sets.
LC4.8	3122 785 90662 [1, 2] / 3122 785 90851	
LC4.9	3122 785 90662 [1, 2] / 3122 785 90851	MFD variant only.
LC7.x	t.b.d.	
JL2.1	3122 785 90861	

Notes:
1. Included in LVDS tool package.
2. Pins "27" and "28" must be grounded or not connected.

5.4 Error Codes

5.4.1 Introduction

Error codes are required to indicate failures in the TV set. In principle a unique error code is available for every:
- Activated protection.
- Failing I2C device.
- General I2C error.
- SDRAM failure.

The last five errors, stored in the NVM, are shown in the Service menu's. This is called the error buffer.
The error code buffer contains all errors detected since the last time the buffer was erased. The buffer is written from left to right. When an error occurs that is not yet in the error code buffer, it is displayed at the left side and all other errors shift one position to the right.
An error will be added to the buffer if this error differs from any error in the buffer. The last found error is displayed on the left.
An error with a designated error code may **never** lead to a deadlock situation. This means that it must always be diagnosable (e.g. error buffer via OSD or blinking LED procedure, ComPair to read from the NVM).
In case a failure identified by an error code automatically results in other error codes (cause and effect), only the error code of the MAIN failure is displayed.

Example: In case of a failure of the I2C bus (CAUSE), the error code for a "General I2C failure" and "Protection errors" is displayed. The error codes for the single devices (EFFECT) is not displayed. All error codes are stored in the same error buffer (TV's NVM) except when the NVM itself is defective.

5.4.2 How to Read the Error Buffer

You can read the error buffer in 3 ways:
- On screen via the SAM/SDM/CSM (if you have a picture). Example:
  - ERROR: 0 0 0 0 0 : No errors detected
  - ERROR: 6 0 0 0 0 : Error code 6 is the last and only detected error
  - ERROR: 9 6 0 0 0 : Error code 6 was detected first and error code 9 is the last detected (newest) error
- Via the blinking LED procedure (when you have no picture). See "The Blinking LED Procedure".
- Via ComPair.

5.4.3 Error Codes

In case of non-intermittent faults, write down the errors present in the error buffer and clear the error buffer before you begin the repair. This ensures that old error codes are no longer present.
If possible, check the entire contents of the error buffer. In some situations, an error code is only the result of another error and not the actual cause of the problem (for example, a fault in the protection detection circuitry can also lead to a protection).

Table 5-3 Error code overview

Error code[1)]	Description	Item nr.	Remarks
0	No error.		
1	DC Protection of speakers.		
2	+12V protection error.		12V missing or "low".
3	Reserved.		
4	General I2C error.		note 2
5	Trident Video Processor communication error.	7202	When Trident IC is defective, error 10 and 14 might also be reported. Trident communicates via parallel bus, not via the I2C bus. The I2C bus of Trident is only used in ComPair mode.
6	I2C error while communicating with the NVM.	7315	The TV will not start-up due to critical data not available from the NVM, but the LED will blink the error code.
7	I2C error while communicating with the Tuner.	1101	
8	I2C error while communicating with the IF Demodulator.	7113	
9	I2C error communicating with the Sound Processor.	7411	
10	SDRAM defective.	7204	
11	I2C error while communicating with the HDMI IC.	7817	
12	I2C error while communicating with the MOJO PNX8314.	7G00	if applicable
13	DVB HW communication error.	7F01, 7K00, 7G00	if applicable
14	SDRAM defective.	7205	
15	Reserved.		
16	Reserved.		
17	Reserved.		
18	I2C error while communicating with the iBoard processor.		if applicable
19	I2C error while communication with 1080p bolt-on module.		if applicable

Notes
1. Some of the error codes reported are depending on the option code configurations.
2. This error means: no I2C device is responding to the particular I2C bus. Possible causes: SCL/SDA shorted to GND, SCL shorted to SDA, or SCL/SDA open (at uP pin). The internal bus of the Trident platform should not cause the entire system to halt as such an error can be reported.

5.4.4 How to Clear the Error Buffer

The error code buffer is cleared in the following cases:
- By using the CLEAR command in the SAM menu:
  - To enter SAM, press the following key sequence on the remote control transmitter: "**062596**" directly followed by the OSD/i+ button (do not allow the display to time out between entries while keying the sequence).
  - Make sure the menu item CLEAR is selected. Use the MENU UP/DOWN buttons, if necessary.
  - Press the MENU RIGHT button to clear the error buffer. The text on the right side of the "CLEAR" line will change from "CLEAR?" to "CLEARED"
- If the contents of the error buffer have not changed for 50 hours, the error buffer resets automatically.

Note: If you exit SAM by disconnecting the mains from the television set, the error buffer is not reset.

5.5 The Blinking LED Procedure

5.5.1 Introduction

The software is capable of identifying different kinds of errors. Because it is possible that more than one error can occur over time, an error buffer is available, which is capable of storing the last five errors that occurred. This is useful if the OSD is not working properly.

Errors can also be displayed by the blinking LED procedure. The method is to repeatedly let the front LED pulse with as many pulses as the error code number, followed by a period of 1.5 seconds in which the LED is "off". Then this sequence is repeated.

Example (1): error code 4 will result in four times the sequence LED "on" for 0.25 seconds / LED "off" for 0.25 seconds. After this sequence, the LED will be "off" for 1.5 seconds. Any RC5 command terminates the sequence. Error code LED blinking is in red colour.

Example (2): the content of the error buffer is "**12 9 6 0 0**" After entering SDM, the following occurs:
- 1 long blink of 5 seconds to start the sequence,
- 12 short blinks followed by a pause of 1.5 seconds,
- 9 short blinks followed by a pause of 1.5 seconds,
- 6 short blinks followed by a pause of 1.5 seconds,
- 1 long blink of 1.5 seconds to finish the sequence,
- The sequence starts again with 12 short blinks.

5.5.2 Displaying the Entire Error Buffer

Additionally, the entire error buffer is displayed when Service Mode "SDM" is entered. In case the TV set is in protection or Stand-by: The blinking LED procedure sequence (as in SDM-mode in normal operation) must be triggered by the following RC sequence: "**MUTE" "062500" "OK**".
In order to avoid confusion with RC5 signal reception blinking, this blinking procedure is terminated when a RC5 command is received.

To erase the error buffer, the RC command "**MUTE" "062599 "OK**" can be used.

5.6 TV Main Software Upgrade

For instructions on how to upgrade the TV Main software, refer to ComPair.

5.7 Fault Finding and Repair Tips

Notes:
- It is assumed that the components are mounted correctly with correct values and no bad solder joints.
- Before any fault finding actions, check if the correct options are set.

5.7.1 NVM Editor

In some cases, it can be convenient if one directly can change the NVM contents. This can be done with the "NVM Editor" in SAM mode. With this option, single bytes can be changed.

Caution:
- **Do not change the NVM settings without understanding the function of each setting, because incorrect NVM settings may seriously hamper the correct functioning of the TV set!**
- Always write down the existing NVM settings, before changing the settings. This will enable you to return to the original settings, if the new settings turn out to be incorrect.

Table 5-4 NVM editor overview

	Hex	Dec	Description
.ADR	0x000A	10	Existing value
.VAL	0x0000	0	New value
.Store	Store?		

5.7.2 Load Default NVM Values

It is possible to download default values automatically into the NVM in case a blank NVM is placed or when the NVM first 20 address contents are "FF". After the default values are downloaded, it is possible to start-up and to start aligning the TV set. To initiate a forced default download the following action has to be performed:

1. Switch “off” the TV set with the mains cord disconnected from the wall outlet (it does not matter if this is from "Stand-by" or "Off" situation).
2. Short-circuit the SDM jumpers on the SSB (keep short circuited).
3. Press “P+” or “CH+” on the local keyboard (and keep it pressed).
4. Reconnect the mains supply to the wall outlet.
5. Release the “P+” or “CH+” when the set is “on” or blue LED is blinking.

When the downloading has completed successfully, the set should be into Stand-by, i.e. red LED on.

Alternative method (1):

1. Go to SAM.
2. Select NVM Editor.
3. Select ADR (address) to 1 (dec).
4. Change the VAL (value) to 170 (dec).
5. Store the value.
6. Do a hard reset to make sure new default values took place.

Alternative method (2):

It is also possible to upload the default values to the NVM with ComPair in case the SW is changed, the NVM is replaced with a new (empty) one, or when the NVM content is corrupted. After replacing an EEPROM (or with a defective/no EEPROM), default settings should be used to enable the set to start-up and allow the Service Default Mode and Service Alignment Mode to be accessed.

5.7.3 Start-up/Shut-down Flowcharts

On the next pages you will find start-up and shut-down flowcharts, which might be helpful during fault finding.
Please note that some events are only related to LCD sets, and therefore not applicable to this PDP chassis.

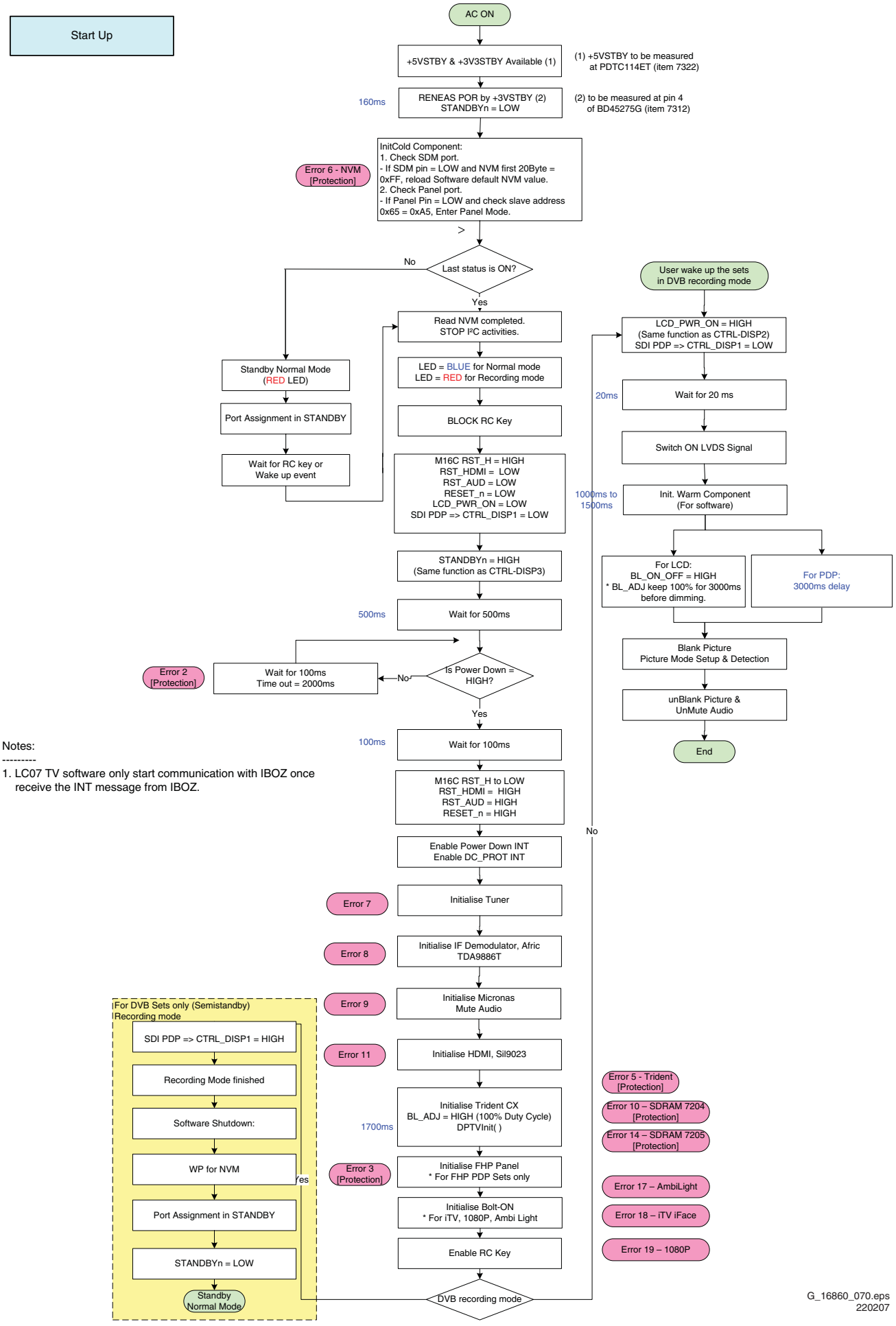


Figure 5-7 Start-up flowchart

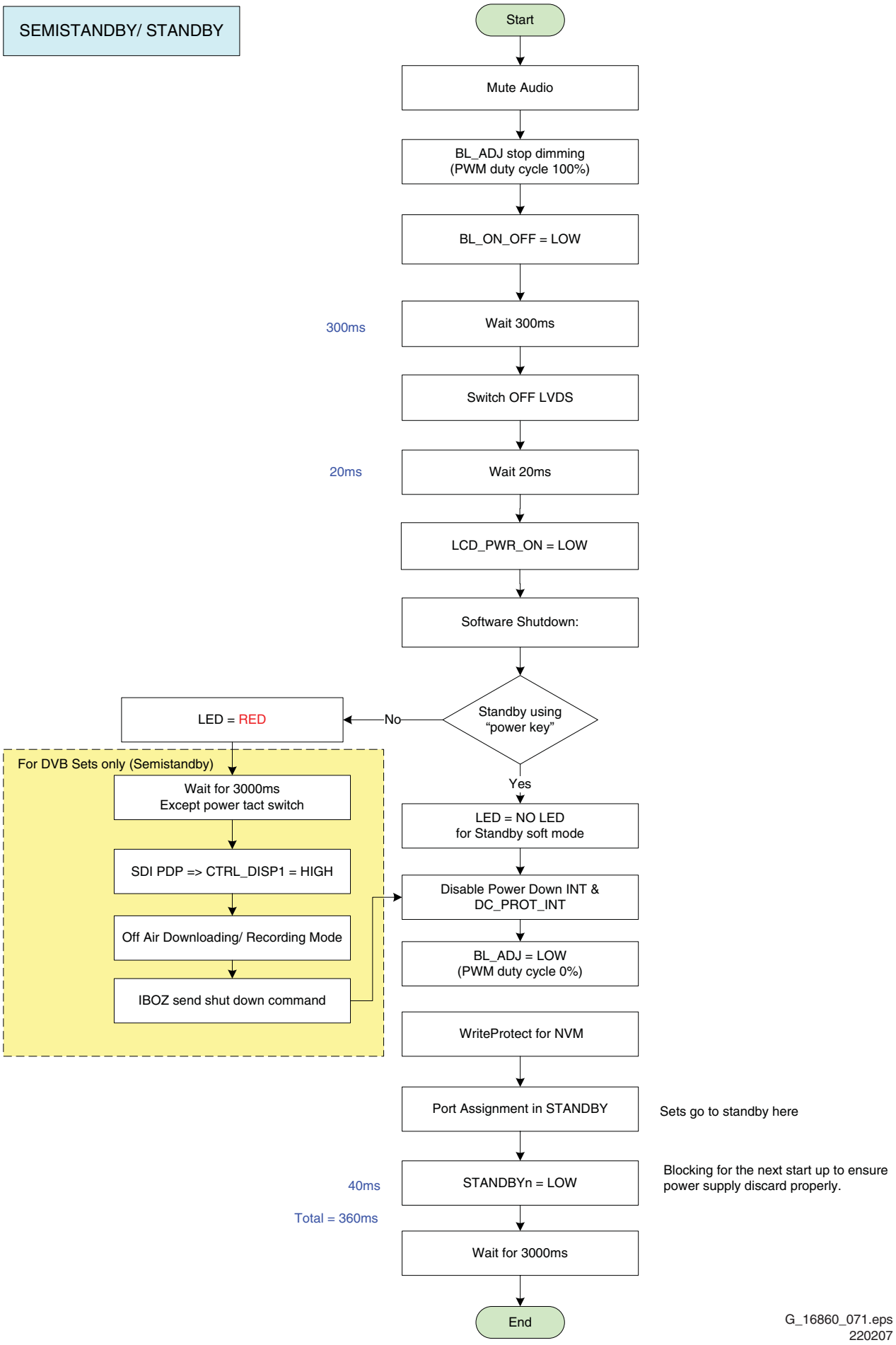
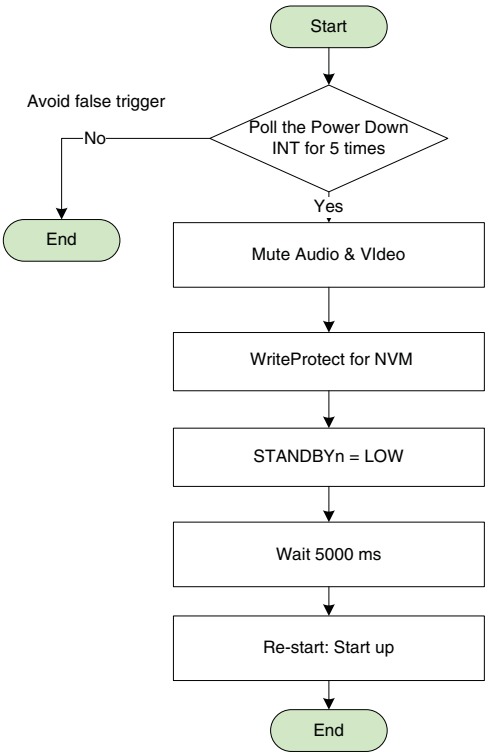


Figure 5-8 Semi Stand-by/Stand-by flowchart

Power Down INT:
AC OFF or Transient INT



Notes:
1. Power Down INT will be based on fall edge triggering
2. +3V3STBY will stay for 15ms, software must perform WriteProtect for NVM within 15ms.

DC_PROT INT

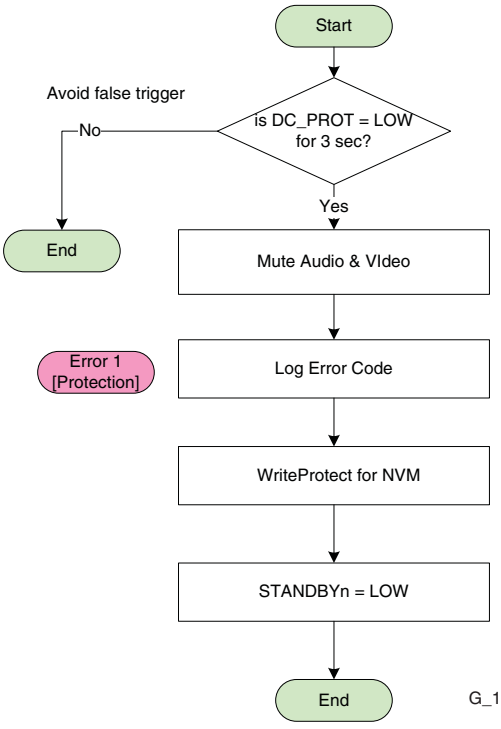


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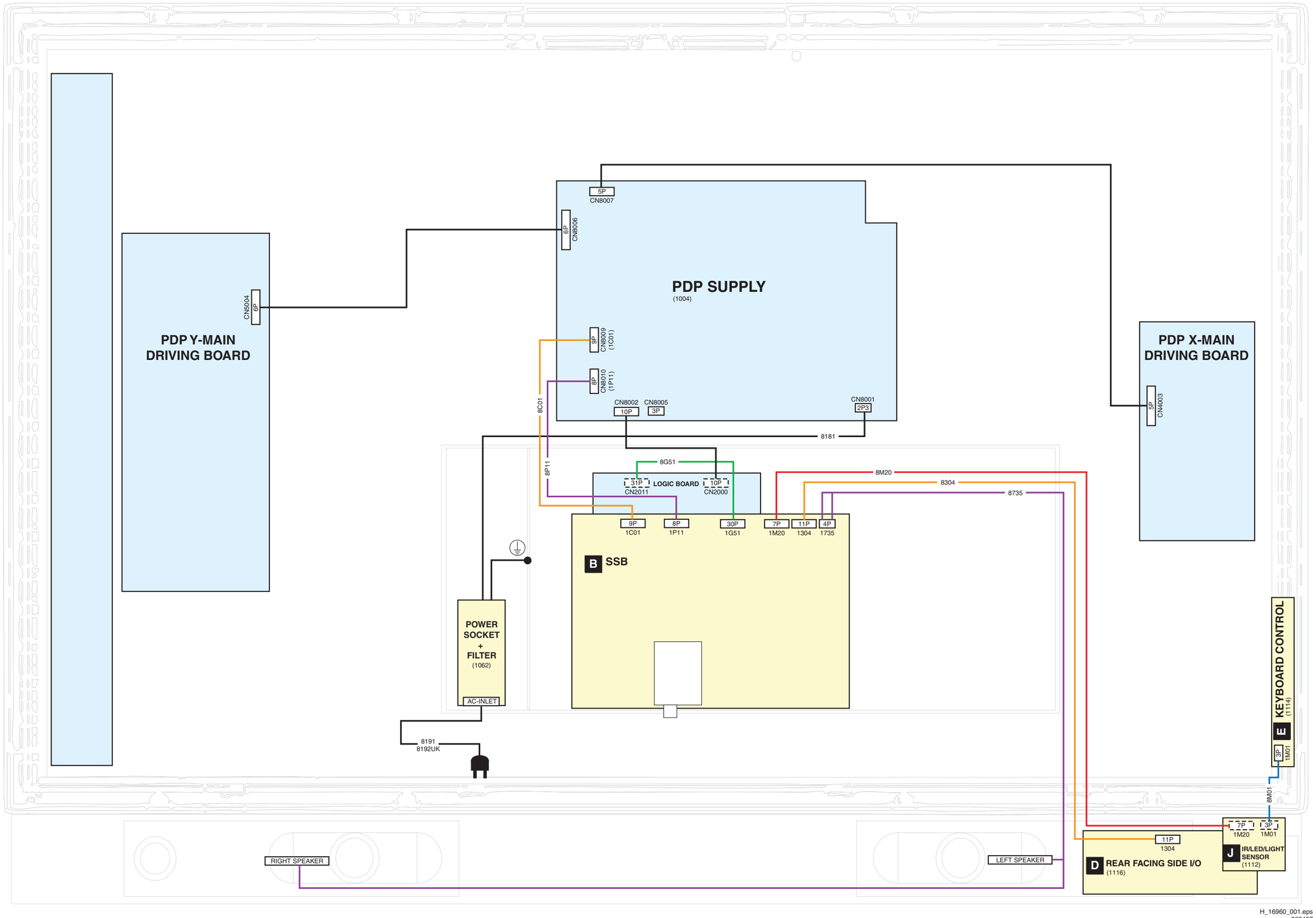
Figure 5-9 Power Down & DC_PROT flowchart

Personal Notes:

6. Block Diagrams, Test Point Overview, and Waveforms

Wiring Diagram

WIRING 42”- 50” PDP



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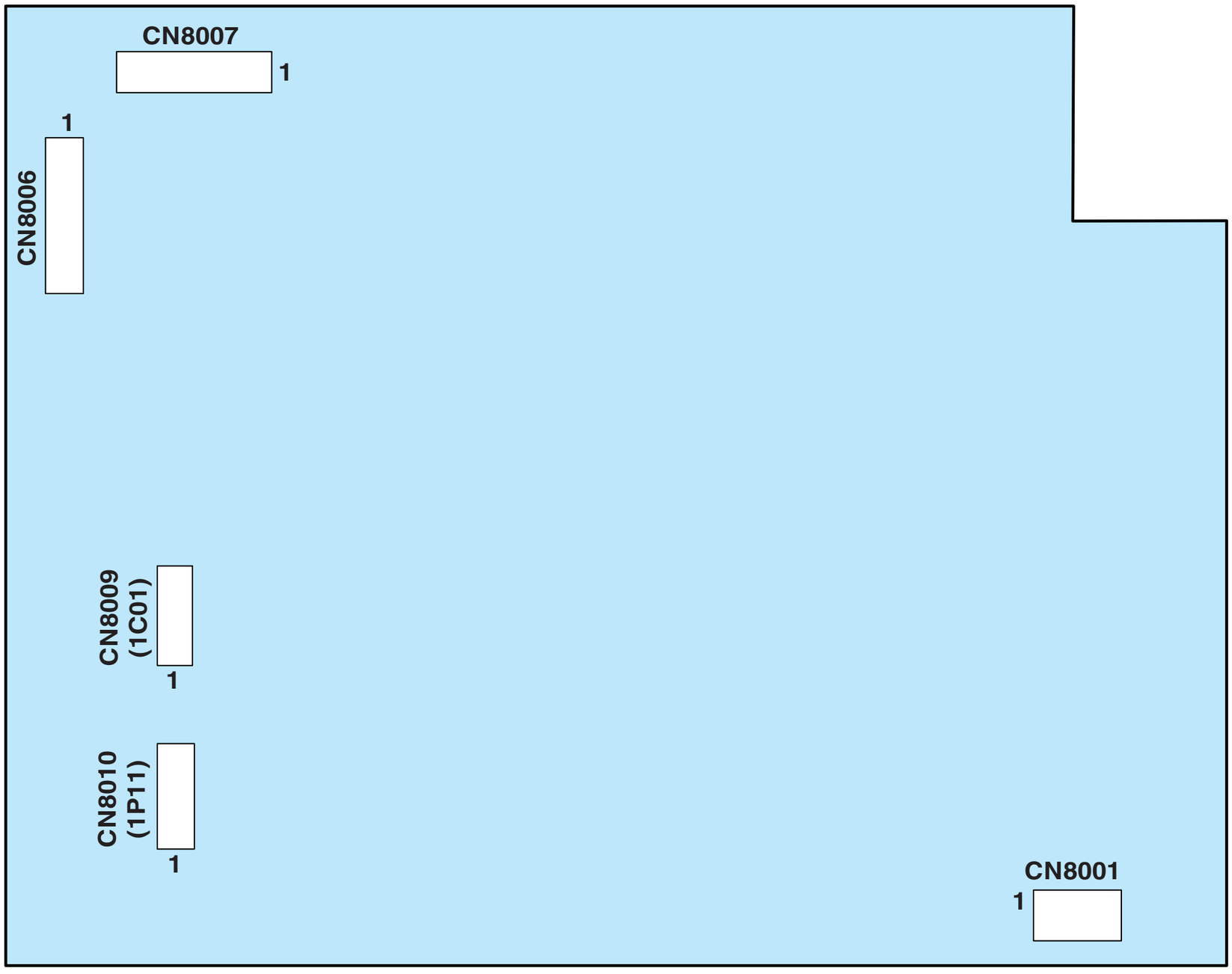
Block Diagram Supply PDP 42” & 50”

SUPPLY PDP 42”- 50”



CN8001

1 AC_L
2 AC_N

CN8009 (1C01)

1 VSND_NEG
2 VSND_POS
3 GND_SND
4 5Vstb
5 5Vsw
6 5Vsw
7 GND_SSP
8 GND_SSP
9 GND_SSP

CN8010 (1P11)

1 N.C
2 Power_ok
3 N.C
4 GND_SSP
5 N.C
6 STANDBY
7 N.C
8 12Vssb

CN8006

1 Vg
2 GND_SSP
3 GND_SSP
4 GND_SSP
5 Vs
6 Vs

CN8007

1 Vg
2 GND_SSP
3 GND_SSP
4 Vs
5 Vs

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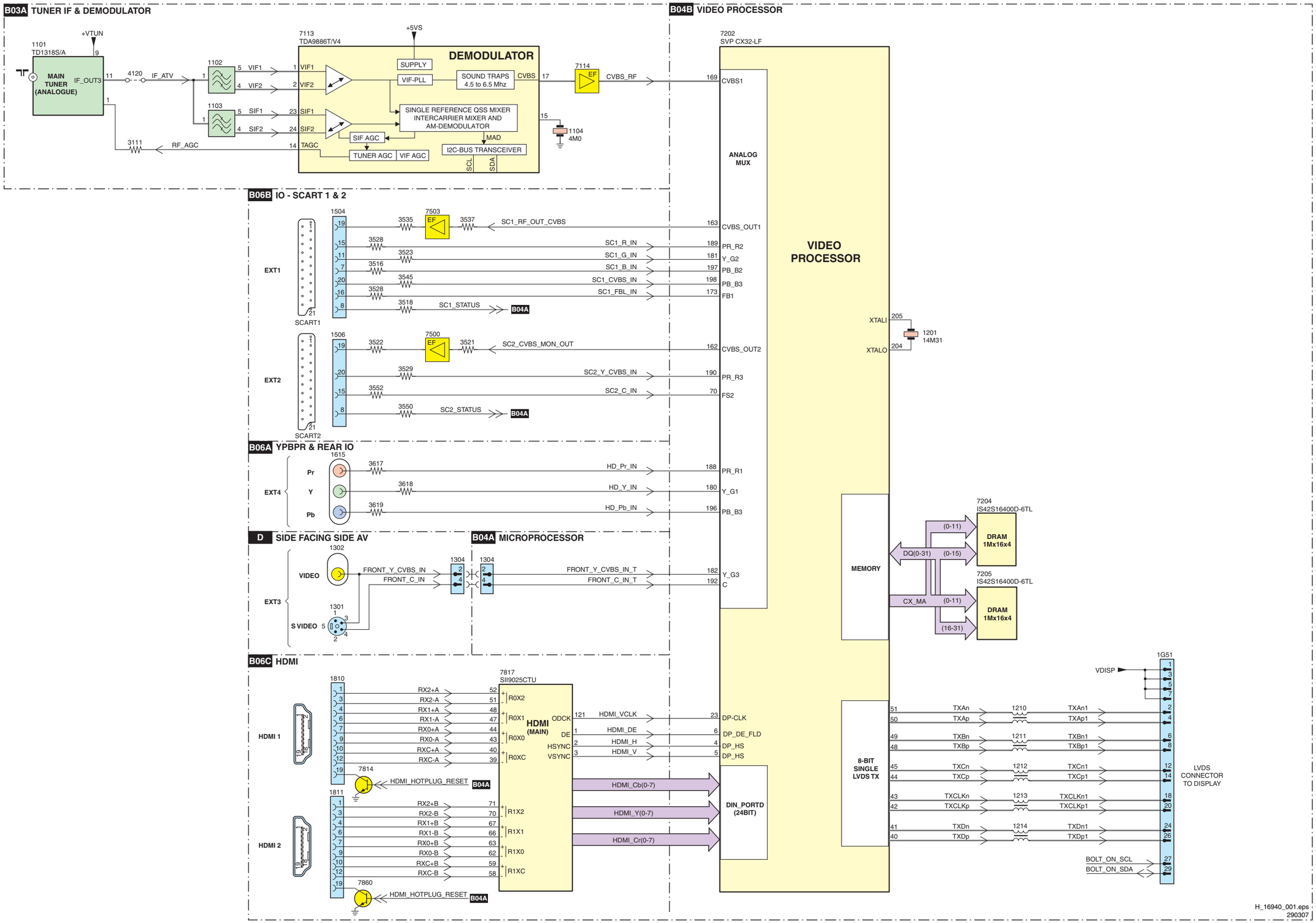
Block Diagram Video

VIDEO



Block Diagram Audio

AUDIO

B03A TUNER IF & DEMODULATOR

1101 TD1318S/A
+VTUN
MAIN TUNER
IF_OUT3
11 IF-ATV
9
1
6103
3111
7109
B04A SAW_SW

1102
1103
5 VIF1
4 VIF2
5 SIF1
4 SIF2
RF_AGC

7113 TDA9886T/V4
+5VS
DEMODULATOR
SUPPLY
VIF-PLL
SOUND TRAPS 4.5 to 6.5 Mhz
CVBS
SINGLE REFERENCE QSS MIXER INTERCARRIER MIXER AND AM-DEMODULATOR
SIOMAD
12 SIF
SIF AGC
MAD
TUNER AGC
VIF AGC
I2C-BUS TRANSCEIVER
SCL
SDA
1 VIF1
2 VIF2
23 SIF1
24 SIF2
14 TAGC
12
15
1104 4M0

B04C AUDIO PROCESSOR

7411 MSP4450P-VK-E8 000 Y
50 ANA-IN1+
67 XTALIN
68 XTALOUT
1411 18M432
SOUND PROCESSOR
SUPPLY
12
13 +5V_D
39 +8V
38 +5V_AUD
40
DACM-L 27
DACM-R 26
DACA-L 24
DACA-R 23

B07 AUDIO

AUDIO-LS_L
AUDIO-LS_R
7A01 TDA8932T/N1
CLASS D POWER AMPLIFIER
3A03 9
3A11 1
3A19 6
3A26 5
27 5A03
22 5A04
1735
1 2 3 4
LEFT SPEAKER
RIGHT SPEAKER
B04A STANDBYn
ENGAGE
B04A DC_PROT
7A05÷7A07
DC-DETECTION

B06B I0 - SCART 1 & 2

2x SCART
1504
EXT1
SC1_AUDIO _MUTE_R B06D
SC1_AUDIO _OUT_R
SC1_AUDIO_IN_R
SC1_AUDIO _OUT_L
SC1_AUDIO_IN_L
SC1_AUDIO _MUTE_L B06D
36 SC1-OUT-R
53 SC1-IN-R
37 SC1-OUT-L
54 SC1-IN-L
1506
EXT2
SC2_AUDIO _MUTE_R B06D
SC2_AUDIO _OUT_R
SC2_AUDIO_IN_R
SC1_AUDIO _OUT_L
SC2_AUDIO_IN_L
SC2_AUDIO _MUTE_L B06D
33 SC2-OUT-R
53 SC2-IN-R
34 SC2-OUT-L
52 SC2-IN-L

B06D HEADPHONE AMP & MUTING

7901
HP_AUDIO_OUT_L
HP_AUDIO_OUT_R
HP_LOUT
HP_ROUT
1304
1303
HEAD_PH_L
HEAD_PH_R
HEADPHONE
B04A ANTI_PLOP
MUTING
CONTROL
SC1_AUDIO _MUTE_R
SC1_AUDIO _MUTE_L
SC2_AUDIO _MUTE_R
SC2_AUDIO _MUTE_L
B06B
B04A POWER_DOWN
B04A STANDBY
B04A MUTEn

B04A MICRO PROCESSOR

D SIDE FACING SIDE AV

D SIDE FACING SIDE AV

EXT3 AUDIO L/R IN
1302
L_FRONT_IN
R_FRONT_IN
1304
SIDE_AUDIO_IN_L_CON
SIDE_AUDIO_IN_R_CON
48 SC4-IN-L
49 SC4-IN-R

B04A MICROPROCESSOR

B06A YPBPR &REAR IO

EXT4 AUDIO L/R IN
1615
COMP_AUDIO_IN_L
COMP_AUDIO_IN_R
50 SC3-IN-L
51 SC3-IN-R

B06C HDMI

7817 SII9025CTU
RXxxA
RXxxB
2x HDMI CONNECTOR
HDMI
RX2
RX1
RX0
RXC
SCK
WS
SD0
MUTE
86 HDMI_I2S_SCK
85 HDMI_I2S_WS
84 HDMI_I2S_SD
77
7810 UDA1334ATS/N2
AUDIO DAC
BCK
WS
DATAI
VOUTL
VOUTR
MUTE
1
2
3
8
14 HDMI_AUDIO_IN_L
16 HDMI_AUDIO_IN_R
57 SC5-IN-L
58 SC5-IN-R

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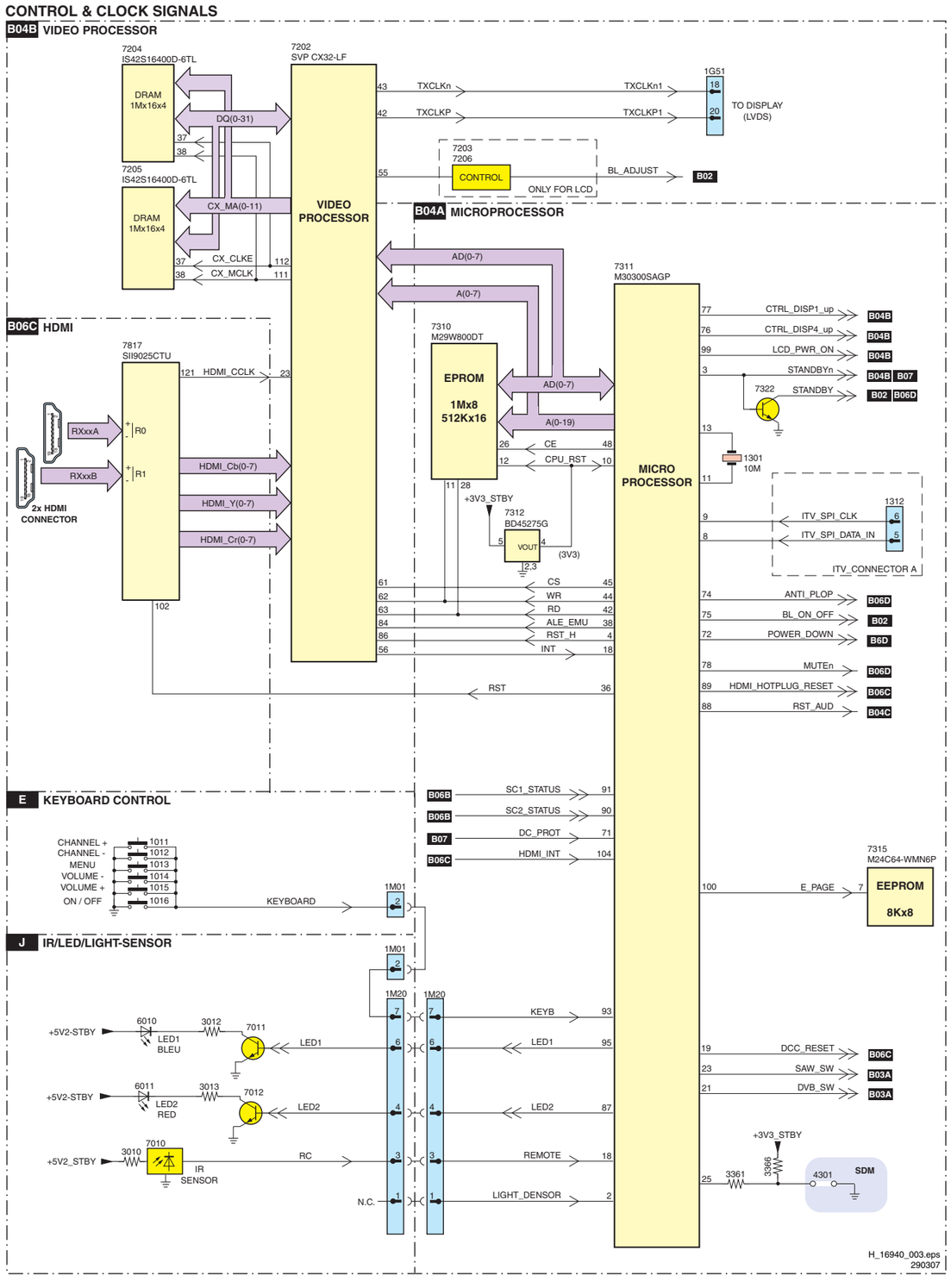
Block Diagram Control & Clock Signals



Personal Notes:

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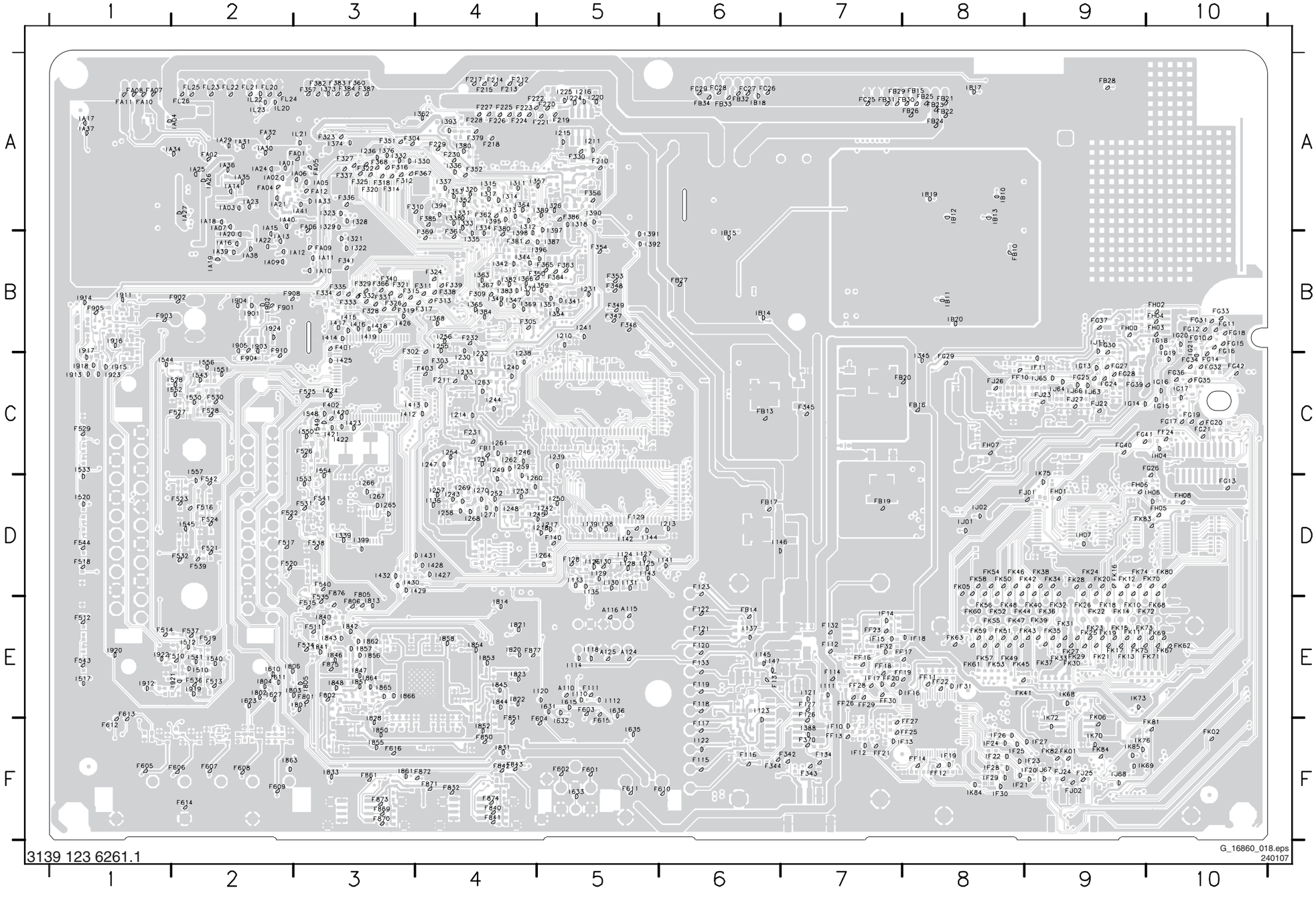
Test Point Overview SSB (Bottom Side)

A110 E5 F126 E7 F218 A4 F304 A3 F324 B4 F341 B3 F361 B4 F386 A5 F522 D2 F540 D3 F613 E1 F870 F3 FA04 A2 FB19 D7 FC26 A6 FF24 C10 FG20 C10 FG40 C9 FJ25 F9 FK20 D9 FK37 E9 FK54 D8 FK74 D9 I114 E5 I137 E6 I218 D5 I246 C4 I263 C4 I321 B3 I342 B4 I831 F4 IF22 F8
A115 E5 F127 E7 F219 A5 F305 B4 F325 A3 F342 F7 F362 A4 F387 A3 F523 D2 F541 D3 F614 F2 F871 F4 FA05 A3 FB20 C8 FC27 A6 FF25 F8 FG21 C10 FG41 C9 FJ26 C8 FK21 E9 FK38 D9 FK55 E8 FK75 E9 I118 E5 I138 D5 I220 A5 I247 C4 I264 D5 I322 B3 I344 B4 I833 F3 IF23 F9
A116 E5 F128 D5 F220 A5 F309 B4 F326 B3 F343 F7 F363 B5 F401 B3 F524 D2 F542 D2 F615 F5 F872 F4 FA06 A3 FB21 A8 FC28 A6 FF26 E7 FG24 C9 FG42 C10 FJ27 C9 FK22 E9 FK39 E9 FK56 E8 FK80 D10 I120 E5 I139 D5 I224 A5 I248 D4 I265 D3 I323 A3 I345 C8 I840 E3 IF24 F8
A124 E5 F129 D5 F221 A5 F310 A4 F327 A3 F344 F6 F364 B5 F402 C3 F525 C3 F543 E1 F616 F3 F873 F3 FA07 A1 FB22 A8 FC29 A6 FF27 F8 FG25 C9 FH00 B9 FK01 F9 FK23 E9 FK40 E9 FK57 E8 FK81 F10 I121 E7 I141 D6 I225 A5 I249 C4 I266 D3 I326 A5 I347 B4 I841 E3 IF25 F8
A125 E5 F130 D5 F222 A4 F311 B4 F328 B3 F345 C7 F365 B5 F403 C4 F526 C3 F544 D1 F801 E3 F874 F4 FA08 A1 FB23 A8 FF10 C8 FF28 E7 FG26 C10 FH01 D9 FK02 F10 FK24 D9 FK41 E8 FK58 D8 FK82 F9 I122 F6 I142 D5 I230 C4 I250 D5 I267 D3 I328 A3 I349 B4 I842 E3 IF26 F8
F111 E5 F131 E6 F223 A4 F312 A3 F329 B3 F346 B5 F366 B3 F510 E2 F527 C2 F601 F5 F802 E3 F875 E3 FA09 B3 FB24 A8 FF11 E8 FF29 E7 FG27 C9 FH02 B10 FK05 D8 FK25 E9 FK42 D9 FK59 E8 FK83 D9 I123 E6 I143 D5 I231 B5 I251 C4 I268 D4 I329 A3 I351 B5 I843 E3 IF27 F9
F112 E7 F132 E7 F224 A4 F313 B4 F330 A5 F347 B5 F367 A4 F511 E3 F528 C2 F602 F5 F805 D3 F876 D3 FA10 A1 FB25 A8 FF12 F8 FF30 E7 FG28 C9 FH03 B10 FK06 E9 FK26 E9 FK43 E9 FK60 E8 FK84 F9 I124 D5 I144 D5 I232 C4 I252 D4 I269 D4 I330 A4 I352 A4 I844 E4 IF28 F8
F114 E7 F133 E6 F225 A4 F314 A3 F331 B3 F348 B5 F368 A3 F512 E1 F529 C1 F603 E5 F806 E3 F877 E4 FA11 A1 FB26 A8 FF13 F7 FG10 B10 FG29 C8 FH04 B10 FK10 E9 FK27 E9 FK44 E8 FK61 E8 FL20 A2 I125 D5 I145 E6 I233 C4 I253 D4 I270 D4 I331 A4 I353 A4 I845 E4 IF29 F8
F115 F6 F134 F7 F226 A4 F315 B3 F332 B3 F349 B5 F369 B4 F513 E2 F530 C2 F604 F5 F832 F4 F901 B2 FA12 A3 FB27 B6 FF14 F8 FG11 B10 FG30 B9 FH05 D10 FK11 E9 FK28 D9 FK45 E8 FK62 E10 FL21 A2 I126 D5 I146 D6 I236 A3 I254 C4 I271 D4 I332 A3 I354 B5 I846 E3 IF30 F8
F116 F6 F140 D5 F227 A4 F316 A3 F333 B3 F350 B5 F370 F7 F514 E1 F531 D3 F605 F1 F840 F4 F902 B2 FA32 A2 FB28 A9 FF16 E7 FG12 B10 FG31 B10 FH06 D9 FK12 D9 FK29 E9 FK46 D8 FK63 E8 FL22 A2 I127 D5 I147 E6 I238 C4 I255 B4 I311 A4 I333 A4 I357 A5 I847 E3 IF31 E8
F117 F6 F210 A5 F228 A4 F317 B4 F334 B3 F351 A3 F379 A4 F515 E3 F532 D2 F606 F2 F841 F4 F903 B1 FB10 B8 FB29 A7 FF17 E8 FG13 D10 FG32 C10 FH07 C8 FK13 E9 FK30 E9 FK47 E8 FK67 E10 FL23 A2 I128 D5 I210 B5 I239 C5 I256 B4 I312 A4 I334 A4 I359 B5 I848 E3 IF32 E7
F118 E6 F211 C4 F229 A4 F318 A3 F335 B3 F352 A4 F380 A4 F516 D2 F534 E3 F607 F2 F842 F4 F904 C2 FB11 C4 FB30 A8 FF18 E7 FG14 C10 FG33 B10 FH08 D10 FK14 E9 FK31 E9 FK48 E8 FK68 E10 FL24 A2 I129 D5 I211 A5 I240 C4 I257 D4 I313 A4 I335 B4 I362 A4 I850 F3 IG13 C9
F119 E6 F212 A4 F230 A4 F319 B3 F336 A3 F353 B5 F381 B4 F517 D2 F535 E3 F608 F2 F843 F4 F905 B1 FB13 C6 FB31 A7 FF19 E8 FG15 B10 FG34 C10 FJ01 D9 FK15 E9 FK32 E9 FK49 E8 FK69 E10 FL25 A2 I130 D5 I213 D6 I241 B5 I258 D4 I314 A4 I336 A4 I363 B4 I851 E3 IG14 C9
F120 E6 F213 A4 F231 C4 F320 A3 F337 A3 F354 B5 F382 A3 F518 D1 F536 E2 F609 F2 F850 F4 F908 B2 FB14 E6 FB32 A6 FF20 E7 FG16 B10 FG35 C10 FJ02 F9 FK16 D9 FK33 E9 FK50 D8 FK70 D10 FL26 A2 I131 D5 I214 C4 I242 D5 I259 C4 I315 A4 I337 A4 I364 A4 I852 F4 IG15 C10
F121 E6 F214 A4 F232 B4 F321 B3 F338 B4 F356 A5 F383 A3 F519 E2 F537 E2 F610 F6 F851 E4 F910 B2 FB15 A8 FB33 A6 FF21 F7 FG17 C10 FG36 C10 FJ22 C9 FK17 E9 FK34 D9 FK51 E8 FK71 E10 I110 E5 I133 D5 I215 A5 I243 D4 I260 D4 I317 A4 I338 A4 I365 B4 I853 E4 IG16 C10
F122 E6 F215 A4 F302 B3 F322 A3 F339 B4 F357 A3 F384 A3 F520 D2 F538 D3 F611 F5 F861 F3 FA01 A3 FB16 C8 FB34 A6 FF22 E8 FG18 B10 FG37 B9 FJ23 C9 FK18 E9 FK35 E9 FK52 E8 FK72 E10 I111 E7 I135 D5 I216 A5 I244 C4 I261 C4 I318 A5 I339 D3 I366 B4 I854 E4 IG17 C10
F123 D6 F217 A4 F303 C4 F323 A3 F340 B3 F360 A3 F385 A4 F521 D2 F539 D2 F612 F1 F869 F3 FA02 A2 FB17 D6 FC25 A7 FF23 E7 FG19 C10 FG39 C9 FJ24 F9 FK19 E9 FK36 E9 FK53 E8 FK73 E9 I112 E5 I136 D4 I217 D5 I245 D5 I262 C4 I320 A4 I341 B5 I367 B4 I855 F3 IG18 B10
I368 B4 I856 E3 IG19 C10
I369 B4 I857 E3 IG20 B10
I370 B4 I858 E4 IG21 B10
I373 A3 I861 F3 IH04 C10
I374 A3 I862 E3 IH06 D10
I376 A3 I863 F2 IH07 D9
I380 A4 I864 E3 IJ01 D8
I382 B4 I865 E3 IJ02 D8
I383 B4 I866 E3 IJ11 B9
I384 B4 I901 B2 IJ63 C9
I387 B5 I902 B2 IJ64 C9
I388 F7 I903 B2 IJ65 C9
I389 A5 I904 B2 IJ66 C9
I390 A5 I905 B2 IJ67 F9
I391 B5 I911 B1 IJ68 F9
I392 B5 I912 E1 IK68 E9
I393 A4 I913 C1 IK69 F9
I394 A4 I914 B1 IK70 F9
I395 A4 I915 C1 IK72 E9
I396 B5 I916 B1 IK73 E9
I397 A5 I917 B1 IK75 C9
I398 B4 I918 C1 IK76 F9
I399 D3 I919 E2 IK84 F8
I412 C3 I920 E1 IK85 F9
I413 C3 I921 E2 IL20 A2
I414 B3 I922 E1 IL21 A3
I415 B3 I923 C1 IL22 A2
I416 B3 I924 B2 IL23 A2
I417 B3 IA01 A2
I418 B3 IA02 A2
I419 B3 IA03 A2
I420 C3 IA04 A2
I421 C3 IA05 A3
I422 C3 IA06 A3
I423 C3 IA07 A2
I424 C3 IA09 B2
I425 C3 IA10 B3
I426 B3 IA11 B3
I427 D4 IA12 B3
I428 D4 IA13 B2
I429 D4 IA14 A2
I430 D3 IA15 A2
I431 D4 IA16 B2
I432 D3 IA17 A1
I510 E2 IA18 A2
I512 E2 IA19 B2
I517 E1 IA20 B2
I520 D1 IA21 A2
I528 C2 IA22 B2
I530 C2 IA23 A2
I533 C1 IA24 A2
I540 E2 IA25 A2
I541 E2 IA26 A2
I543 C2 IA27 A2
I544 C1 IA29 A2
I545 D2 IA30 A2
I548 C3 IA31 A2
I549 C3 IA33 A3
I550 C3 IA34 A2
I551 C2 IA35 A2
I552 C2 IA36 A2
I553 D3 IA37 A1
I554 C3 IA38 B2
I556 C2 IA39 B2
I557 C2 IA40 A2
I610 E2 IA41 A3
I611 E2 IB10 A8
I615 E5 IB11 B8
I623 E2 IB12 A8
I627 E2 IB13 A8
I631 E5 IB14 B6
I632 F5 IB15 B6
I633 F5 IB17 A8
I635 F5 IB18 A6
I636 E5 IB19 A8
I801 E3 IB20 B8
I802 E2 IF10 F7
I803 E2 IF11 C9
I804 E2 IF12 F7
I805 E3 IF13 F8
I806 E2 IF14 E7
I813 E3 IF15 E7
I814 E4 IF16 E8
I820 E4 IF17 E7
I821 E4 IF18 E8
I822 E4 IF19 F8
I823 E4 IF20 F9
I828 F3 IF21 F8



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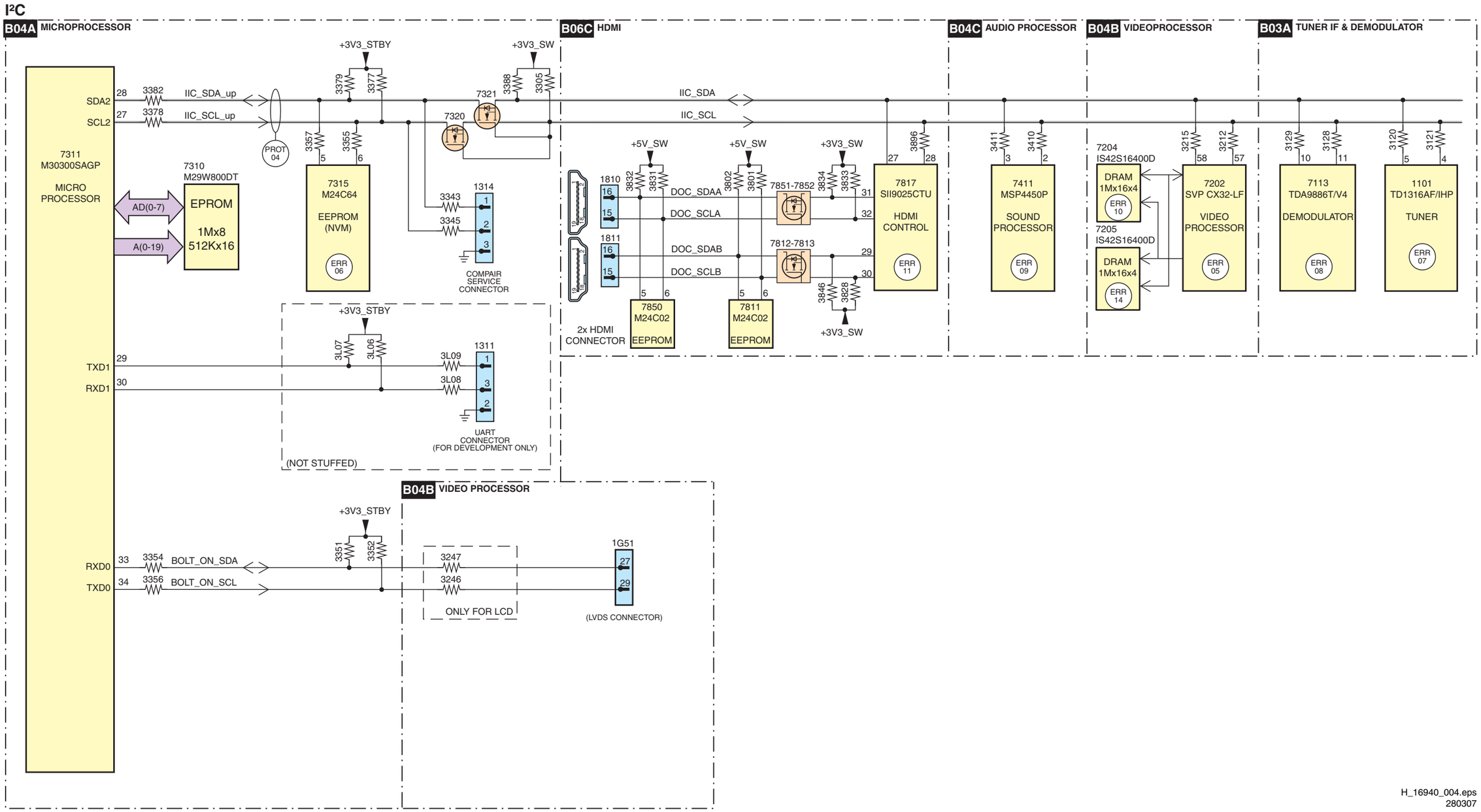
I2C IC's Overview



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Supply Lines Overview

SUPPLY LINES OVERVIEW

SUPPLY

B02 DC-DC

CN8010 (1P11) 1P11
+5V_STANDBY → B04a
+12V_DISP → B04b,c

CN8009 (1C01) 1CO1
-AUDIO_POWER → B07
+AUDIO_POWER → B07
+5V_STANDBY → B03a,b,c,e,B04c, B06a,b,c,d
4C57÷4C60 +5V_SW
7B02 IN OUT COM +3V3_STBY → B04a
7B05 +5V_SW
B04A STANDBY — ONLY FOR LCD
7B04 IN OUT COM +3V3_SW → B03a,f,B04a,b, B06c
7B06 IN OUT COM +3V3_MOJO → B03f
7B08 IN OUT COM +1V2_MOJO → B03d
5B01 5B06 6B03 +VTUN (34V) → B03a
7B03 3B13
7B01 STEP DOWN REG. 5B03 5B02 +1V8S_SW → B03b,B04b

B03A TUNER IF & DEMODULATOR

B02 +3V3_SW → +3V3_SW
B02 +5V_SW → +5V_SW
3133 5114 +5VS
3134 5115 +5V_IF
B02 +VTUN → +VTUN (ONLY FOR ANALOG TV)
B02 +12V_DISP → +12V_DISP

B03B DVB-DEMODULATOR

B02 +1V8S_SW → +1V8S_SW
B03f +3V3 → +3V3
5F10 +3V3FE
B02 +5V_SW → +5V_SW

B03C DVB-COMMON INTERFACE

B03f +3V3 → +3V3
5K03 +3V3_STV
5K04 +3V3_CORE
5K05 +3V3_BUF
B02 +5V_SW → +5V_SW
7K05 IN OUT COM
PCMCIA_5V
5K01 PCMCIA_AVCC
5K02 PCMCIA_VPP

B03D DVB-MOJO

B02 +1V2_MOJO → +1V2_MOJO
B03f +3V3 → +3V3
5G04 +3V3_VDDP
B03f +3V3clean → +3V3clean

B03E DVB-MOJO MEMORY

B03f +3V3 → +3V3
5H02 +3V3_NOR48
B02 +5V_SW → +5V_SW

B03F DVB-MOJO ANALOF BACK END

B02 +3V3_MOJO → +3V3_MOJO
5JO1 +3V3clean → B03d
7J04 +3V3 → B03b,c,d
IJ01 CONTROL
+1V8S_SW

B04A MICROPROCESSOR

B02 +3V3_STBY → +3V3_STBY
B02 +3V3_SW → +3V3_SW
B02 +5V_STANDBY → +5V_STANDBY
3L10 5304 1M20 5
1M20 J IR/LED

B04B VIDEO PROCESSOR

B02 +1V8S_SW → +1V8S_SW
3244 CX_PAVDD1
3248 CX_PAVDD2
5224 CX_PDVDD
5226 CX_PAVDD
5220 CX_AVDD_ADC1
5222 CX_AVDD_ADC2
5225 CX_AVDD_ADC3
5227 CX_AVDD_ADC4
B02 +3V3_SW → +3V3_SW
5219 CX_AVDD3_BG_ASS
5223 CX_AVDD3_OUTBUF
5218 CX_AVDD3_ADC1
5221 CX_AVDD3_ADC2
B02 +12V_DISP → +12V_DISP
7210 5215 VDISP
5217 1G51
7208 CONTROL
LCD_PWR_ON B04A
ONLY FOR LCD

B04C AUDIO PROCESSOR

B02 +12V_DISP → +12V_DISP
4401 +AUDIO_POWER_+12V_DISP
7410 IN OUT COM +8V
B02 +5V_SW → +5V_SW
3402 5401 +5V_D
5402 +5V_AUD

B06A YPBPR & REAR IO

B02 +5V_SW → +5V_SW

B06B IO - SCART 1 & 2

B02 +5V_SW → +5V_SW

B06C HDMI

B02 +3V3_SW → +3V3_SW
B02 +5V_SW → +5V_SW
HDMI CONNECTOR-1 1810 18 +5VHDMI_A
HDMI CONNECTOR-2 1811 18 +5VHDMI_B

B06D HEADPHONE AMP & MUTING

B02 +3V3_STBY → +3V3_STBY
B02 +5V_SW → +5V_SW

B07 AUDIO

B02 +AUDIO_POWER → +AUDIO_POWER
3A01 VDDA
5A05 VDD
5A07 4A01 +AUDIO_POWER_+12V_DISP (RES)
-AUDIO_POWER → -AUDIO_POWER
3A02 VSSA
5A06 VSS

J IR/LED/LIGHT-SENSOR

1M20 5 +5V_STANDBY → +5V_STANDBY
1M20 B04A SSB

B02 B03b,B04b B03d B03b,c,d

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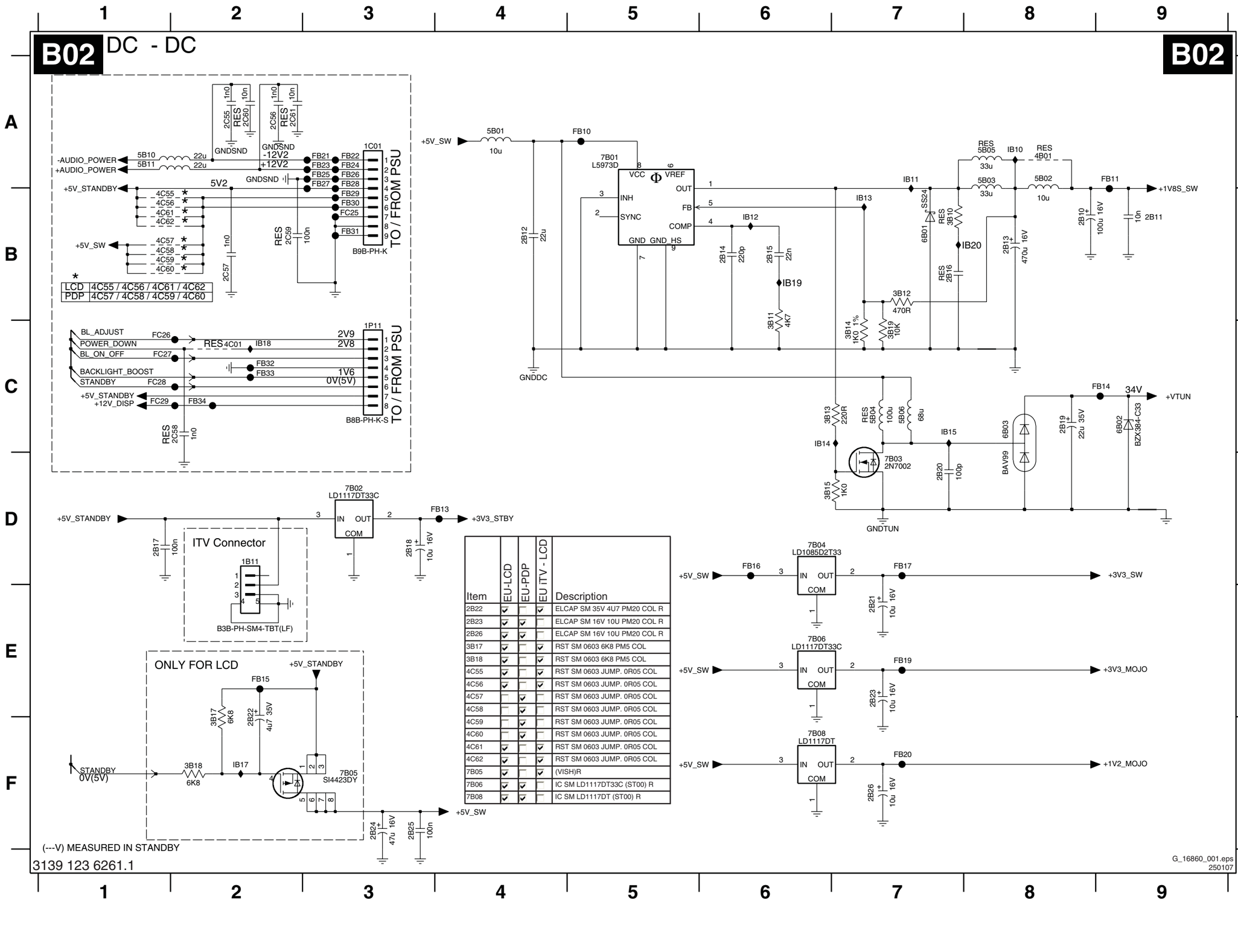
7. Circuit Diagrams and PWB Layouts

SSB: DC/DC



Item	EU-LCD	EU-PDP	EU iTV - LCD	Description
2B22	✓		✓	ELCAP SM 35V 4U7 PM20 COL R
2B23	✓	✓		ELCAP SM 16V 10U PM20 COL R
2B26	✓	✓		ELCAP SM 16V 10U PM20 COL R
3B17	✓		✓	RST SM 0603 6K8 PM5 COL
3B18	✓		✓	RST SM 0603 6K8 PM5 COL
4C55	✓		✓	RST SM 0603 JUMP. 0R05 COL
4C56	✓		✓	RST SM 0603 JUMP. 0R05 COL
4C57		✓		RST SM 0603 JUMP. 0R05 COL
4C58		✓		RST SM 0603 JUMP. 0R05 COL
4C59		✓		RST SM 0603 JUMP. 0R05 COL
4C60		✓		RST SM 0603 JUMP. 0R05 COL
4C61	✓		✓	RST SM 0603 JUMP. 0R05 COL
4C62	✓		✓	RST SM 0603 JUMP. 0R05 COL
7B05	✓		✓	(VISH)R
7B06	✓	✓		IC SM LD1117DT33C (ST00) R
7B08	✓	✓		IC SM LD1117DT (ST00) R

SSB: Tuner & Demodulator

B03A TUNER IF & DEMODULATOR

B03A

SAW FILTERS

A110 ★4110 I110 ★4111 F111
IF_ATV 3113 47R 2110 220p 2111 I112 68p 2114 3p3
5111 390n 5110
40.4MHz Trap
3113/4110 & 2110/4111 at same position
RESERVED
1102 I OGND O1 O2 OFWK3953M 38M9
A115 A116 5117 RES VIF1 VIF2
+5V_IF 3116 6K8 2117 10n I114
3117 2K2 6K8 1SS356 I118
1103 I ISWI O1 O2 OFWK9656M 38M9
A124 A125 5113 RES SIF2 SIF1
+5V_IF 3118 2K2
SAW_SW I141 3119 22K I120 3122 18K 7109 BC847B

TUNER

★1101 TUNER
+12V_DISP/SW_DISP 5118 220R I146 3136 47R I147 3137 47R
7133 L78M05CDT IN OUT COM
I145 4V9
F112 ★4112 F132 TUNER TD1316AF/IHP-2 F134
MTR PDC PWR AGC SCL SDA XTAL OUT1 IF AGC IF OUT2 IF OUT1 CMT
2147 330n 2148 100n
ONLY FOR ANALOG TV
+VTUN 3130 1K0 ★4113 I137
2119 100n 2142 10u 50V RES 2151 10u 50V
5112 220R F133 2120 22u 2118 10n 4V3
2146 1u0 1u0 1u0 1u0 1u0 1u0 1u0 1u0
F115 F116 F117 F118 F119 F120 F121 F122 F123
★4114 ★4115 ★4116 ★4117 ★4118 ★4119
F126 F127

DVB ONLY

+5V_IF 2113 10n
7111 74HCT4053D VDD MDX G4 VSS VEE
3111 5K6 RF_AGC
+5V_IF 3110 8K2
6110 BAS316 I111 3115 39K
2112 10u 2149 2u2
★4125
RF_AGC_IBO WAGC_SW DVB_SW IIC_SDA I2C_TDA_SDA IIC_SCL I2C_TDA_SCL VIM_IBO IF_AGC_IBO VIP_IBO IF_A1V 4MHZ_CLK

I122 1V3 ★4120
I123 5120 120R RES 3120 10R I121 2122 15p ★4123
5121 120R RES 3121 10R 2121 15p
★4121 +5V_IF RES 3131 4K7 RES 7131 BSH111 +3V3_SW
★4122 +5V_IF RES 3132 4K7 RES 7132 BSH111 +3V3_SW

DEMODULATOR

RF_AGC 3124 100R RES 2124 22n F128 2125 470n I126 2126 220n I127 I124 3123 330R 2123 1n5 I125
1104 4M0 2127 22p 2143 1n0 I142
7113 TDA9886T/V4 TOP TAGC VAGC VPLL REF AFC
TUNER AGC | VIF AGC | RC VCO | DIGITAL VCO CONTROL | AFC DETECTOR
VIF2 2V 2 VIF2 VIF1 2V 1 VIF1 SIF2 2V 24 SIF2 SIF1 2V 23 SIF1
VIF-PLL
SINGLE REFERENCE QSS MIXER INTERCARRIER MIXER AND AM-DEMODULATOR
SOUND TRAPS 4.5 to 6.5 Mhz CVBS 17 F130
AUDIO PROCESSING AND SWITCHES AUD 8 DEEM 5 I128 2133 10n
NARROW-BAND FM-PLL DEMODULATOR AFD 6 I129 2136 470n
MAD
SUPPLY SIF AGC OUTPUT PORTS I²C-BUS TRANSCEIVER
20 Vp 18 AGND 13 NC 3 OP1 22 OP2 11 SCL 10 SDA 7 DGND 12 SIOMAD 4 FMPLL
+5VS 2138 10n I143 1n0 I144 10n 2145 2144 2V1 2V3
I131 2137 10n I130 3127 5K6 2139 390p
IIC_SCL 3128 100R RES 2140 I133
IIC_SDA 3129 100R 2141 RES I135
SIF I136
+5VS 3135 15R 2128 10n
Q7114 BC847B 2V1 I138 ★4124
3125 150R I139 5116 5u6 F140 CVBS_RF
3126 180R 2134 15p 2135 15p RES

★	ANALOG	DIGITAL
4110	Y	Y
4111	Y	Y
4112	Y	Y
4113	Y	▬
4114	Y	▬
4115	▬	Y
4116	▬	Y
4117	▬	Y
4118	▬	Y
4119	▬	Y
4120	Y	▬
4121	Y	▬
4122	Y	▬
4123	Y	Y
4124	Y	Y

+5V_SW F114 3133 1R0 5114 10u F129 +5VS 2129 22u 2130 10n
+5V_SW 3134 1R0 5115 10u F131 +5V_IF 2131 22u 2132 22u

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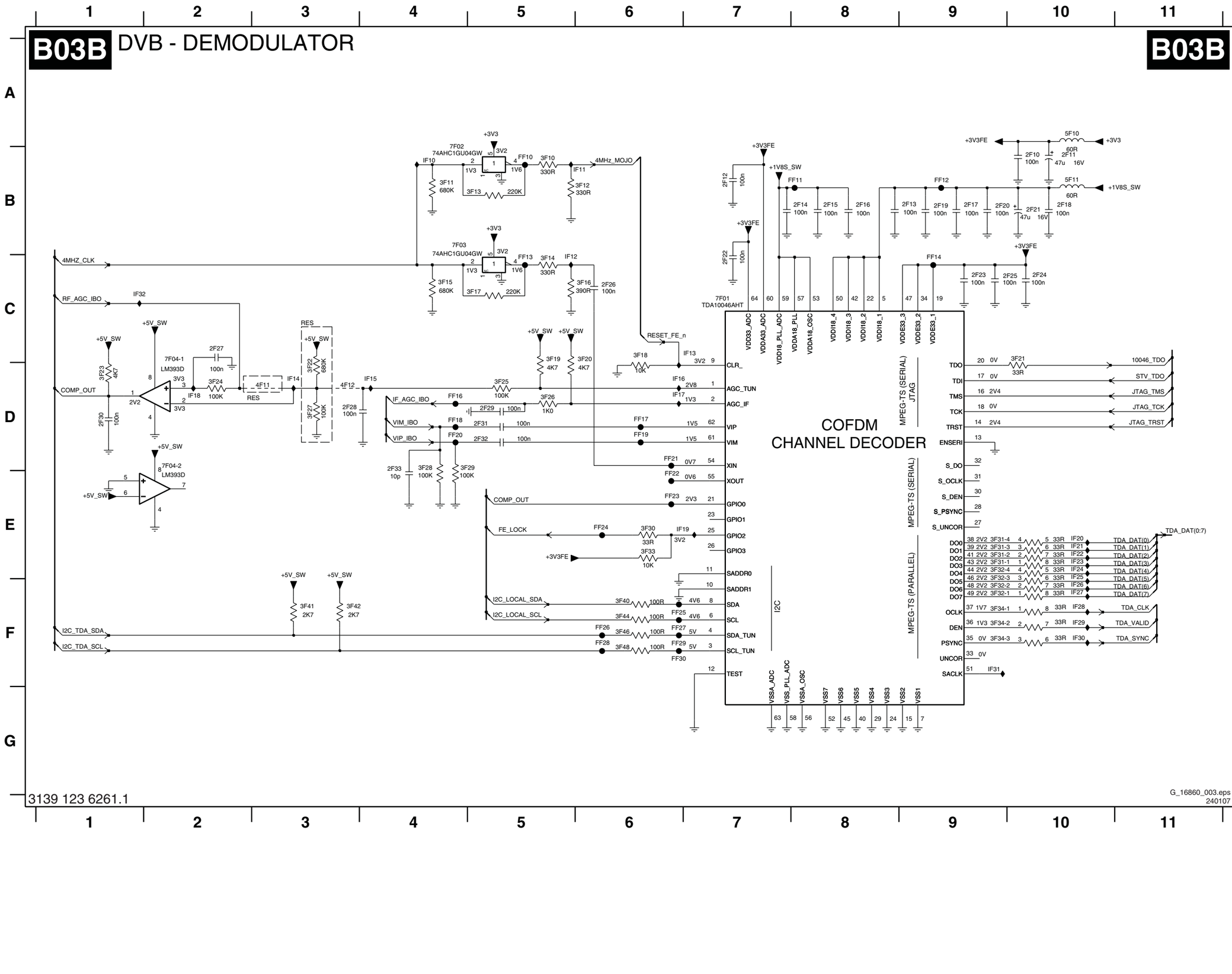
1101 A6
1102 B4
1103 C4
1104 E4
2110 B2
2111 B2
2112 B11
2113 B10
2114 B2
2115 B6
2116 B6
2117 C3
2118 C10
2119 C8
2120 C9
2121 E7
2122 D7
2123 F3
2124 F2
2125 F3
2126 F3
2127 F5
2128 F7
2129 H11
2130 H11
2131 I11
2132 I11
2133 G6
2134 H7
2135 H8
2136 H6
2137 H5
2138 H2
2139 H5
2140 I3
2141 I3
2142 C9
2143 F5
2144 I3
2145 I3
2146 B6
2147 A8
2148 A9
2149 B11
2151 C9
3110 A12
3111 A11
3113 B2
3115 B12
3116 B3
3117 C3
3118 D2
3119 D1
3120 D8
3121 E8
3122 D2
3123 E3
3124 E2
3125 G7
3126 H7
3127 H6
3128 I4
3129 I3
3130 B8
3131 D10
3132 E10
3133 H10
3134 H10
3135 F7
3136 A8
3137 A9
4110 B2
4111 B2
4112 B6
4113 B8
4114 C7
4115 C7
4116 C7
4117 C7
4118 C7
4119 C7
4120 D8
4121 D10
4122 E10
4123 D7
4124 G8
4125 B11
5110 B2
5111 B1
5112 B9
5113 C5
5114 H11
5115 H11
5116 G8
5117 B5
5118 A8
5120 D8
5121 E8
6103 C3
6110 A11
7109 D2
7111 B10
7113 F2
7114 G7
7131 D11
7132 E11
7133 A8

A110 B1
A115 B5
A116 B5
A124 C5
A125 C5
F111 B3
F112 B6
F114 H10
F115 B7
F116 B7
F117 B7
F118 B7
F119 B7
F120 B7
F121 B7
F122 B7
F123 B7
F126 C7
F127 C7
F128 F2
F129 H11
F130 G6
F131 H11
F132 B6
F133 B9
F134 A8
F140 G8
I110 B2
I111 A12
I112 B3
I114 C4
I118 C4
I120 D2
I121 D10
I122 D7
I123 E10
I124 E3
I125 F4
I126 F3
I127 F3
I128 G6
I129 G6
I130 H6
I131 H5
I133 I4
I135 I4
I136 I4
I137 B8
I138 B8
I139 I4
I141 B8
I142 G7
I143 H7
I144 H7
I145 A9
I146 A8
I147 A8

SSB: DVB - Demodulator

B03B DVB - DEMODULATOR



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2F10	B10	FF25	F6
2F11	B10	FF26	F6
2F12	B7	FF27	F6
2F13	B9	FF28	F6
2F14	B8	FF29	F6
2F15	B8	FF30	F6
2F16	B8	IF10	B4
2F17	B9	IF11	B6
2F18	B10	IF12	C5
2F19	B9	IF13	C7
2F20	B9	IF14	D3
2F21	B10	IF15	D4
2F22	C7	IF16	D6
2F23	C9	IF17	D6
2F24	C10	IF18	D2
2F25	C10	IF19	E6
2F26	C6	IF20	E10
2F27	C2	IF21	E10
2F28	D3	IF22	E10
2F29	D5	IF23	E10
2F30	D1	IF24	E10
2F31	D5	IF25	E10
2F32	D5	IF26	F10
2F33	D4	IF27	F10
3F10	B5	IF28	F10
3F11	B4	IF29	F10
3F12	B6	IF30	F10
3F13	B5	IF31	F9
3F14	C5	IF32	C1
3F15	C4		
3F16	C6		
3F17	C5		
3F18	C6		
3F19	C5		
3F20	C6		
3F21	C10		
3F22	D3		
3F23	D1		
3F24	D2		
3F25	D5		
3F26	D5		
3F27	D3		
3F28	D4		
3F29	D5		
3F30	E6		
3F31-1	E9		
3F31-2	E9		
3F31-3	E9		
3F31-4	E9		
3F32-1	F9		
3F32-2	F9		
3F32-3	F9		
3F32-4	E9		
3F33	E6		
3F34-1	F9		
3F34-2	F9		
3F34-3	F9		
3F40	F6		
3F41	F3		
3F42	F3		
3F44	F6		
3F46	F6		
3F48	F6		
4F11	D3		
4F12	D3		
5F10	A10		
5F11	B10		
7F01	C7		
7F02	B4		
7F03	B4		
7F04-1	C2		
7F04-2	D2		
FF10	B5		
FF11	B8		
FF12	B9		
FF13	C5		
FF14	C9		
FF16	D4		
FF17	D6		
FF18	D4		
FF19	D6		
FF20	D4		
FF21	D6		
FF22	E6		
FF23	E6		
FF24	E6		

SSB: DVB - Common Interface

B03C DVB-COMMON INTERFACE

B03C

PCMCIA CONTROLLER

I²C INTERFACE

TS INTERFACE

INTERRUPTS MANAGEMENT

UCSG

CURRENT SWITCH

LATCH

BUS TRANSCEIVER

68p PCMCIA CONNECTOR

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1K00-A H7 FK45 J8
1K00-B H8 FK46 J7
2K00 H4 FK47 J8
2K01 I4 FK48 J7
2K02 H15 FK49 J8
2K03 H15 FK50 J7
2K04 J2 FK51 J8
2K05 G15 FK52 J7
2K06 H15 FK53 J8
2K07 F14 FK54 J7
2K08 H15 FK55 J8
2K09 H15 FK56 J7
2K10 H15 FK57 J8
2K11 I15 FK58 J7
2K12 I15 FK59 J8
2K13 I15 FK60 J7
2K14 F9 FK61 J8
2K15 K4 FK62 J8
2K16 F8 FK63 J7
2K17 G8 FK67 H8
3K00 F2 FK68 H7
3K01 F2 FK69 H8
3K02-1 F4 FK70 H7
3K02-2 F4 FK71 H8
3K02-3 F4 FK72 H7
3K03-1 F5 FK73 H8
3K03-2 F5 FK74 H7
3K03-3 F5 FK75 H8
3K03-4 F5 FK80 H7
3K04 H9 FK81 H15
3K05-1 F5 FK82 I15
3K05-2 F5 FK83 I15
3K05-3 F5 FK84 E15
3K05-4 F6 IK68 C10
3K06 J9 IK69 C10
3K07 J9 IK70 F15
3K08 J6 IK72 F16
3K09 F9 IK73 C10
3K10 E14 IK75 F11
3K11 F16 IK76 C11
3K12 F10 IK84 F8
3K13 F14 IK85 C4
3K15 B9
3K16 B9
3K17 B9
3K18 B9
3K19 B9
3K20 B9
3K21 B9
3K22 B9
3K23-1 K4
3K23-2 K4
3K23-3 K4
3K23-4 K4
3K24-1 K4
3K24-2 K4
3K24-3 K4
3K24-4 K4
3K25 J4
3K26 K4
3K27 B2
3K28 B2
3K29 B3
3K30 B3
3K31 B3
3K32 B3
3K33 B3
3K34-1 B3
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3K40 B4
3K41 B5
3K42 B5
3K43 B5
3K44 B5
3K45 B5
3K46 B5
3K47 B5
3K48 B6
3K49 H2
3K50 H2
3K51 J6
3K52 B4
5K01 G14
5K02 H14
5K03 H14
5K04 I14
5K05 I14
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7K03 J3
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7K05 E15
FK01 E9
FK02 E10
FK05 F9
FK06 F14
FK10 H7
FK11 H8
FK12 H7
FK13 H8
FK14 H7
FK15 H8
FK16 H7
FK17 H8
FK18 I7
FK19 I8
FK20 I7
FK21 I8
FK22 I7
FK23 I8
FK24 I7
FK25 I8
FK26 I7
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FK28 I7
FK29 I8
FK30 I7
FK31 I7
FK32 I7
FK33 I8
FK34 I7
FK35 I8
FK36 I7
FK37 I8
FK38 I7
FK39 I8
FK40 I7
FK41 I8
FK42 I7
FK43 I8
FK44 J7

SSB: DVB - Mojo

B03D DVB-MOJO

B03D

FOR DVE. ONLY

POWER ON RESET

FOR DEV. ONLY

4G05 FOR DEVELOPMENT ONLY
4G01, 4G02, 4G03,4G04 FOR PRODUCTION

PRO. FOR USB

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1G01-1 A8
1G01-2 A9
1G03 D2
1G04 I1
2G02 G5
2G03 G6
2G04 G6
2G05 G6
2G06 H6
2G07 H6
2G08 H6
2G09 H6
2G10 H6
2G11 H6
2G12 F6
2G13 G6
2G14 G6
2G15 G6
2G16 G6
2G17 G6
2G18 G6
2G19 H9
2G20 I9
2G21 I9
2G22 H6
2G23 I6
2G24 I6
2G31 B4
2G32 C5
2G33 C5
2G34 D1
3G11 E6
3G12 E9
3G15 A4
3G16 A4
3G17 A4
3G18 A4
3G19 A4
3G20 A4
3G28 E14
3G29 F14
3G30 E14
3G31 E14
3G33 G2
3G34 G2
3G35 F2
3G36 F14
3G37 F14
3G38 A4
3G40 I8
3G41 E14
3G43 H2
3G44 H2
3G46 H2
3G47 I2
3G48 C6
3G51 G13
3G54 G13
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3G56-1 H10
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3G57-1 G10
3G57-2 H10
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3G57-4 H10
3G58-1 G10
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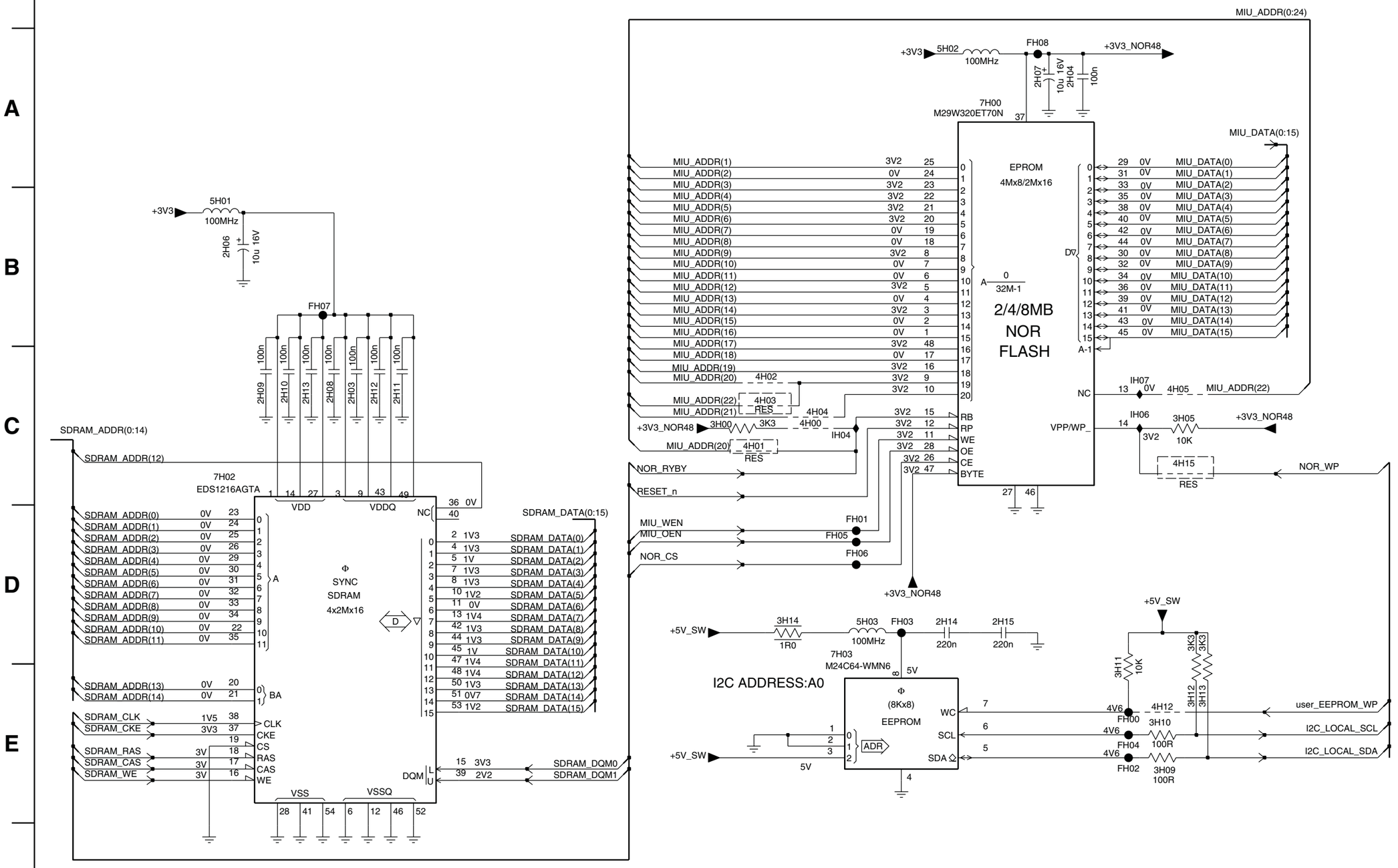
3G59-1 H10
3G59-2 H10
3G59-3 H10
3G59-4 H10
3G60 I11
3G61 I11
3G62 I11
3G63 F10
3G65 C2
4G01 B9
4G02 B9
4G03 B9
4G04 C8
4G05 C8
4G09 A2
4G10 A2
4G31 C4
5G01 F5
5G02 G5
5G03 C4
5G04 I6
7G00-1 F7
7G00-2 E3
7G00-3 F3
7G00-4 A12
7G00-5 G12
7G00-6 H4
7G00-7 D12
7G00-8 D7
7G06 C1
FG10 A7
FG11 A7
FG12 A7
FG13 A9
FG14 A7
FG15 A7
FG16 A7
FG17 H2
FG18 C6
FG19 H2
FG20 E13
FG21 E13
FG22 E13
FG23 E13
FG24 E14
FG25 E14
FG26 E9
FG27 F14
FG28 F13
FG29 F13
FG30 F13
FG31 H2
FG32 H3
FG33 H2
FG34 H3
FG35 H3
FG36 I3
FG37 C5
FG39 F6
FG40 A7
FG41 A7
FG42 C1
IG13 I8
IG14 F1
IG15 G1
IG16 G1
IG17 F11
IG18 F2
IG19 G2
IG20 G2
IG21 E6

SSB: DVB - Mojo Memory

B03E DVB-MOJO MEMORY

B03E



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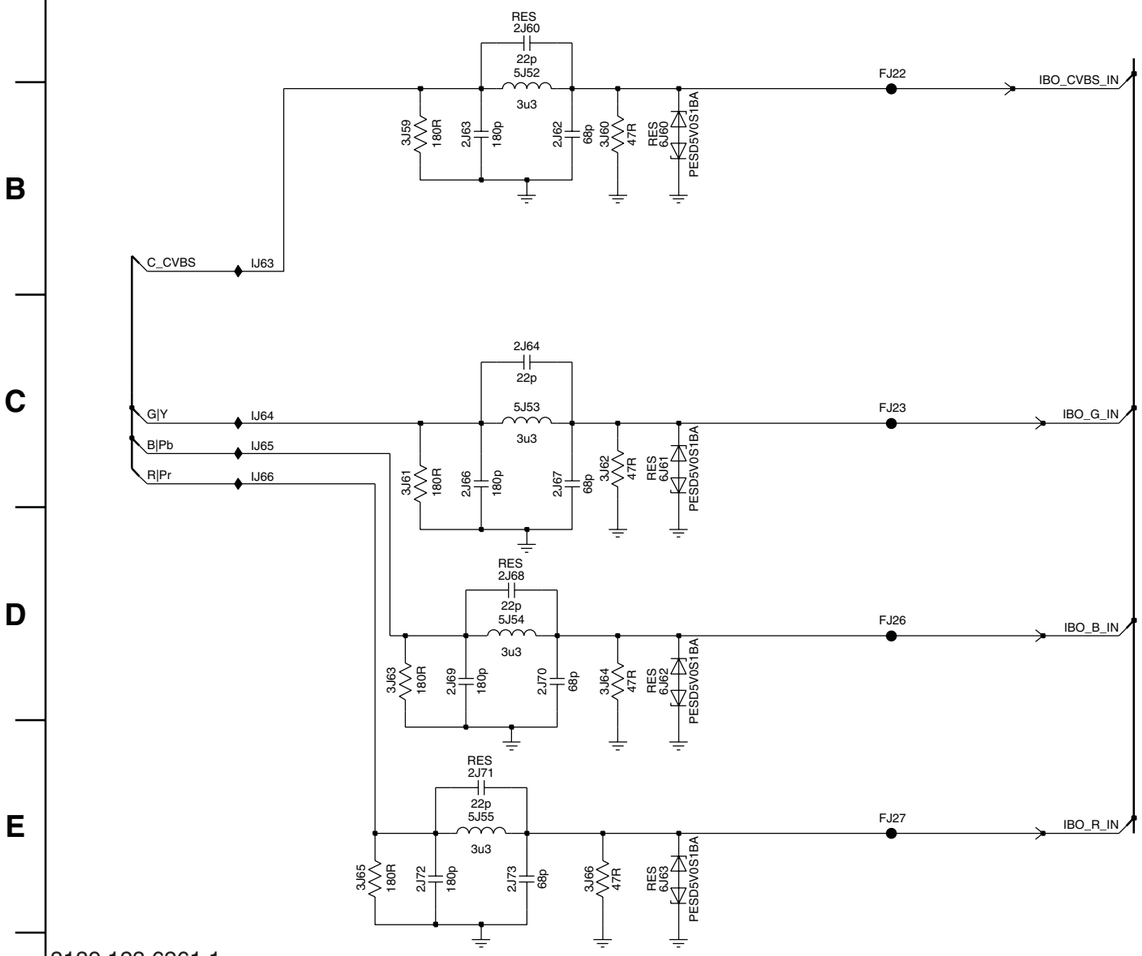
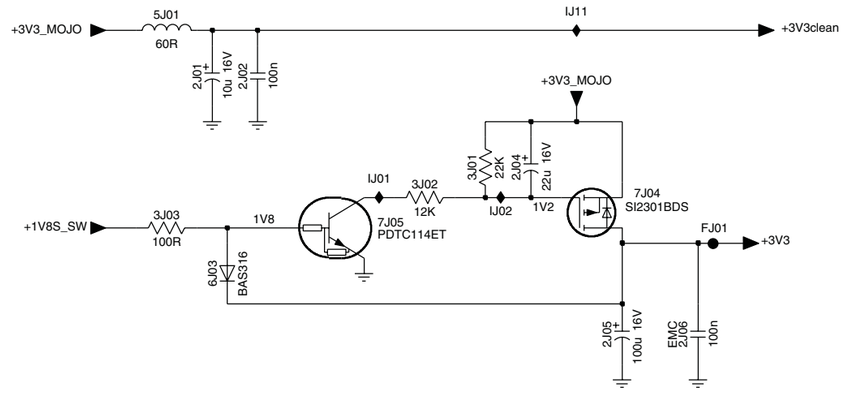
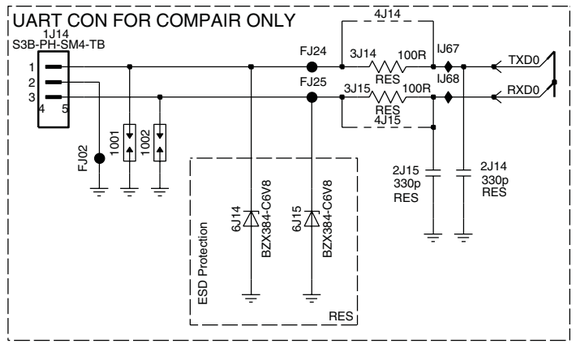
SSB: DVB - Mojo Analog Back End

B03F DVB-MOJO ANALOG BACK END

B03F







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SSB: Micro Processor

B04A MICROPROCESSOR

B04A

TO / FROM SIDE IO

TO / FROM IR/ LED & KEYBOARD

ITV_Connector A:

Item	ITV	with Side AV	Other region	Description
1304				CON V 11P M 2.00 PH B
1312				CON V 10P M 2.00 SM PH R
1315				CON V 6P M 2.00 PH B
1M20				CON V 7P M 2.00 PH B
2321				CER1 0603 NP0 50V 22P COL
2322				CER1 0603 NP0 50V 22P COL
3320				RST SM 0603 100R PM5 COL
3322				RST SM 0603 100R PM5 COL
3351				RST SM 0603 3K3 PM5 COL
3352				RST SM 0603 3K3 PM5 COL
3354				RST SM 0603 100R PM5 COL
3356				RST SM 0603 100R PM5 COL
3370				RST SM 0603 100R PM5 COL
3L08				RST SM 0603 100R PM5 COL
3L09				RST SM 0603 100R PM5 COL
3L10				RST SM FUSE 1206 1R PM5 R
3L12				RST SM 0603 10K PM5 COL
3L13				RST SM 0603 10K PM5 COL
4L09				RST SM 0603 JUMP. 0R05 COL

1301 B3	3376 D6	F341 E11
1302 I2	3377 E7	F342 I2
1303 I2	3378 F7	F343 I2
1304 A9	3379 E7	F344 I3
1305 I9	3380 D5	F345 G10
1306 H8	3381 G2	F346 H5
1307 I8	3382 E7	F347 I5
1308 I8	3383 F2	F348 I5
1309 I8	3384 H2	F349 I5
1310 I9	3385 H2	F350 F8
1311 H7	3386 H2	F351 I5
1312 H5	3387 E5	F352 I5
1314 I3	3388 E5	F353 I5
1M20 H8	3389 I11	F354 I5
2310 A4	3390 I11	F356 E8
2311 C13	3391 I11	F357 H8
2312 A4	3392 I11	F360 I9
2313 A4	3393 E1	F361 D3
2314 B3	3394 D1	F362 C5
2315 B1	3395 E2	F363 G11
2316 B3	3396 C7	F364 G11
2317 B2	3397 E5	F365 G11
2318 C3	3398 E2	F366 E11
2319 E11	3399 E2	F367 E11
2320 F9	3L01 G6	F368 C13
2321 G7	3L02 H5	F369 E11
2322 G7	3L04 E2	F370 G6
2323 G1	3L05 B5	F379 D2
2324 F7	3L06 H6	F380 B3
2325 F8	3L07 H7	F381 B3
2326 E8	3L08 H5	F382 I10
2327 H9	3L09 H5	F383 I10
2328 I10	3L10 H11	F384 I10
2329 I10	3L11 C7	F385 D3
2330 I10	3L12 G7	F386 C5
2331 I10	3L13 G7	F387 I10
2332 I12	3L14 G9	FL20 A9
2333 I10	3L15 F1	FL21 A9
2334 I11	3L20 A11	FL22 A9
2335 I11	3L21 A11	FL23 A9
2336 I11	3L22 B11	FL24 A9
2337 I12	3L23 B11	FL25 A9
2338 E2	3L24 A11	FL26 A9
2339 I12	3L25 A11	I311 B5
2340 I10	3L26 D5	I312 B3
2L20 A10	4301 F6	I313 B5
2L21 A10	4302 H11	I314 B5
2L22 A11	4303 H12	I315 B5
2L23 A11	4306 G12	I317 B5
2L24 A12	4307 G12	I318 G9
2L25 A12	4308 H5	I320 C5
2L26 B10	4309 I12	I321 D10
2L27 B10	4310 I11	I322 D10
2L28 B11	4313 H6	I323 D10
2L29 B11	4314 H11	I326 C5
2L30 B10	4315 H11	I328 D10
2L31 B10	4316 G9	I329 E9
2L32 B11	4323 F1	I330 D1
2L33 B11	4324 D2	I331 D3
3300 C1	4325 D2	I332 D1
3303 B5	4L20 A11	I333 D3
3304 D6	4L21 A11	I334 D1
3305 G12	4L24 A11	I335 D3
3306 F7	4L25 A11	I336 D5
3307 G7	5301 A4	I337 D1
3308 G12	5302 C13	I338 D3
3309 G12	5304 I11	I339 D1
3310 B6	6301 B2	I341 D5
3311 B5	6302 D10	I342 D5
3312 B5	6303 E10	I344 D5
3313 B5	6304 E10	I345 E5
3314 B3	6305 F9	I347 G6
3315 B5	6306 I2	I349 G6
3316 B2	6307 I2	I351 F5
3317 B5	6308 H8	I352 D3
3318 B3	6309 I8	I353 D1
3319 B2	6310 I8	I354 F5
3320 B5	6311 I9	I357 C5
3321 B3	6312 I9	I359 G5
3322 B5	6313 I9	I362 D6
3323 B3	6317 D1	I363 G5
3324 C5	6318 E2	I364 D5
3325 C1	7308 E1	I365 G3
3326 D11	7310 C12	I366 E6
3327 C5	7311 B3	I367 E6
3328 D10	7312 B1	I368 G3
3329 C5	7313-1 D9	I369 H5
3330 D10	7313-2 C10	I370 H5
3331 C2	7314 F6	I373 I10
3332 D2	7315 F10	I374 I11
3333 C1	7316 F2	I376 I11
3334 C2	7317 E1	I380 E1
3335 C2	7320 H11	I382 G5
3336 E11	7321 H12	I383 H5
3337 E9	7322 C7	I384 H3
3338 D3	7323-1 G11	I387 B3
3339 D3	7323-2 F1	I388 D6
3340 D3	F302 C6	I389 C5
3341 D3	F303 G6	I390 C6
3342 D3	F304 C6	I391 H6
3343 I1	F305 F5	I392 H6
3344 D5	F309 H5	I393 E2
3345 I1	F310 C11	I394 E2
3346 D5	F311 C11	I395 B5
3347 D5	F312 C13	I396 E5
3348 D5	F313 C11	I397 E5
3349 E5	F314 C13	I398 E5
3350 E5	F315 C11	I399 D1
3351 G7	F316 C13	IL20 A11
3352 G7	F317 C11	IL21 A12
3353 F11	F318 C13	IL22 A11
3354 G7	F319 C11	IL23 A12
3355 G11	F320 C13	
3356 G7	F321 C11	
3357 G11	F322 C13	
3358 F7	F323 B6	
3359 F7	F324 D11	
3360 G5	F325 D13	
3361 F5	F326 D11	
3362 C6	F327 D13	
3363 D2	F328 D11	
3364 D3	F329 D11	
3365 F5	F330 B1	
3366 F5	F331 D11	
3367 F5	F332 D11	
3368 C5	F333 D11	
3369 G5	F334 D11	
3370 G5	F335 D11	
3371 G5	F336 D11	
3372 H2	F337 D13	
3373 G5	F338 D11	
3374 G13	F339 D11	
3375 H2	F340 D11	

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SSB: Video Processor

B04B VIDEO PROCESSOR

B04B

Item	EU LCD	EU PDP	EU/US LCD+ITV	AP/CH/LT LCD	AP/CH/LT PDP	Description
1217			✓	✓		FIL CM SM 50V 100MHZ 67R R
1218			✓	✓		FIL CM SM 50V 100MHZ 67R R
2207			✓	✓		CER2 0603 X7R 16V 100N COL
2208			✓	✓		ELCAP SM SEV 25V 100U PM20 R
			✓	✓		ELCAP SM 16V 100U PM20 COL R
2209			✓	✓		ELCAP SM SEV 25V 100U PM20 R
			✓	✓		ELCAP SM 16V 100U PM20 COL R
2210			✓	✓		CER2 0603 X7R 16V 100N COL
2248			✓	✓		CER2 0805 X7R 16V 1U PM10 R
2267			✓	✓		CER2 0603 X7R 16V 100N COL
2294			✓	✓		CER2 0603 X7R 16V 100N COL
3213			✓	✓		RST SM 0603 47K PM5 COL
3216			✓	✓		RST SM 0603 47M PM5 COL
3217			✓	✓		RST SM 0603 47K PM5 COL
3227			✓	✓		RST SM 0603 100R PM5 COL
3233			✓	✓		RST SM 0603 100R PM5 COL
3235			✓	✓		RST SM 0603 100R PM5 COL
3238			✓			RST SM 0603 100R PM5 COL
3241			✓	✓		RST SM 0603 220R PM5 COL
3242			✓	✓		RST SM 0603 4K7 PM5 COL
3243			✓	✓		RST SM 0603 100R PM5 COL
3245			✓	✓		RST SM 0603 10K PM5 COL
3246			✓	✓		RST SM 0603 100R PM5 COL
3247			✓	✓		RST SM 0603 100R PM5 COL
3250			✓	✓		RST SM 0603 22R PM5 COL
3253			✓	✓		RST SM 0603 22R PM5 COL
3254			✓	✓		RST SM 0603 22R PM5 COL
3256			✓	✓		RST SM 0603 22R PM5 COL
3257			✓			RST SM 0603 10K PM5 COL
3258			✓	✓		RST SM 0603 10K PM5 COL
4204			✓	✓		RST SM 0603 JUMP. 0R05 COL
4205			✓	✓		RST SM 0603 JUMP. 0R05 COL
4206			✓	✓		RST SM 0603 JUMP. 0R05 COL
4208			✓	✓		RST SM 0603 JUMP. 0R05 COL
4209			✓	✓		RST SM 0603 JUMP. 0R05 COL
5215			✓	✓		IND FXD 0805 EMI 100MHZ 220R R
5217			✓	✓		IND FXD 0805 EMI 100MHZ 220R R
6202			✓	✓		DIO REG SM BZX384-C5V6 COL R
7203			✓	✓		TRA SIG SM BC847BW (COL) R
7206			✓	✓		TRA SIG SM BC847BW (COL) R
7208			✓	✓		TRA SIG SM PDTC114ET (COL) R
7210			✓	✓		ES/VISHR
7211			✓	✓		IC SM 74LCX14T (COL) R

	LGE	SDI	FHP
CTRL-DISP1		RESET Semi standby : H Normal and off : L	
CTRL-DISP2(LCD_PWR_on)	DISPEN On time : H Off time : Don't care		CPU-GO On time : H Off time : Don't care
CTRL-DISP3(Rev_Standby)			PDWIN On time : H Off time : Don't care
CTRL-DISP4			PDP-GO On time : H Semi standby : L Off time : Don't care

1201 D4	3241 K9	I232 E4
1210 H12	3242 K9	I233 E4
1211 I12	3243 K9	I236 E15
1212 I12	3244 A7	I238 J4
1213 J12	3245 K8	I239 K4
1214 J12	3246 J14	I240 K8
1215 L7	3247 J14	I241 K9
1216 L7	3248 B7	I242 A6
1G50 H15	3250 J2	I243 A7
1G51 H17	3251 J3	I244 L8
2205 K7	3253 K3	I245 A4
2206 K7	3254 K2	I246 A9
2207 B17	3255 K3	I247 B7
2208 B16	3256 L3	I248 A6
2209 B16	3257 J1	I249 B9
2210 B17	3258 K1	I250 B4
2211 C5	3260-1 B12	I251 B7
2212 C5	3260-2 B12	I252 B9
2213 C5	3260-3 B12	I253 C9
2214 C5	3260-4 B12	I254 C7
2215 C5	3261-1 B12	I255 D2
2216 D9	3261-2 B12	I256 D2
2217 B13	3261-3 B12	I257 J4
2218 B13	3261-4 B12	I258 J4
2219 B13	3262-1 B12	I259 J10
2220 B13	3262-2 B12	I260 J10
2221 B13	3262-3 C12	I261 J10
2222 B13	3262-4 C12	I262 J10
2223 B14	3263-1 E12	I263 K8
2224 E12	3263-2 E12	I264 L3
2225 E12	3263-3 E12	I265 A3
2226 E13	3263-4 E12	I266 A2
2227 E13	3264-1 E12	I267 B3
2228 E13	3264-2 E12	I268 K6
2229 B14	3264-3 E12	I269 K7
2230 C5	3264-4 E12	I270 K7
2231 C5	3265-1 E12	I271 K8
2232 C5	3265-2 E12	
2233 D8	3265-3 F12	
2234 D8	3265-4 F12	
2235 D8	3266 C12	
2236 D3	3267 F13	
2237 D4	3268-1 F12	
2238 D4	3268-2 C12	
2239 D4	3268-3 F12	
2240 D4	3268-4 C12	
2241 D4	3271-1 C12	
2242 D4	3271-2 F12	
2243 D5	3271-3 C12	
2244 D5	3271-4 F12	
2245 D8	3272 J9	
2246 D3	3273 A2	
2247 E3	3274 B2	
2248 C15	3275 A3	
2250 F4	3276 B3	
2251 F4	4203 B14	
2252 F4	4204 B15	
2253 F4	4205 B15	
2254 F4	4206 B15	
2255 F4	4207 L9	
2256 F4	4208 E2	
2257 F4	4209 I2	
2258 F4	4210 L6	
2259 F4	4211 L7	
2260 F4	4212 L7	
2261 F4	4213 L8	
2262 F16	4214 B16	
2263 F16	4215 B16	
2264 F16	5210 B4	
2265 F16	5211 A16	
2266 J11	5212 A14	
2267 I8	5213 C9	
2268 I8	5214 C4	
2269 J11	5215 A16	
2270 J11	5216 C3	
2271 J10	5217 B16	
2272 J10	5218 A6	
2273 J3	5219 A4	
2274 J10	5220 A8	
2275 J3	5221 B6	
2276 J3	5222 B8	
2277 J3	5223 B4	
2278 K9	5224 B7	
2279 A7	5225 B8	
2280 A6	5226 C7	
2281 L8	5227 C8	
2282 A9	6228 D13	
2283 K15	6201 C17	
2284 A4	6202 C15	
2285 K15	7202 D4	
2286 B7	7203 L9	
2287 B9	7204 B11	
2288 B6	7205 E11	
2289 B4	7206 K9	
2290 B7	7207 B16	
2291 B9	7208 C15	
2292 C7	7210 A15	
2293 C9	7211-1 J2	
2294 K3	7211-2 K2	
2295 E13	7211-3 K2	
2296 E13	7211-4 L2	
2297 E13	7211-5 L4	
2298 D8	7211-6 L5	
3201-1 I4	7213-1 A3	
3201-2 I4	7213-2 B3	
3201-3 I4	7213-3 B3	
3201-4 I4	7213-4 B3	
3202-1 I4	7213-5 C3	
3202-2 I4	7213-6 C3	
3202-3 I4	7214 A2	
3202-4 I4	F210 A17	
3203-1 I4	F211 C9	
3203-2 I4	F212 E16	
3203-3 I4	F213 E16	
3203-4 I4	F214 E16	
3204-1 J4	F215 E16	
3204-2 J4	F217 I17	
3204-3 J4	F218 I15	
3204-4 J4	F219 I15	
3210 C16	F220 I15	
3211 D8	F221 I15	
3212 D2	F222 I15	
3213 C15	F223 I15	
3215 D2	F224 I15	
3216 C15	F225 J15	
3217 C16	F226 J15	
3219 E1	F227 J15	
3220 E2	F228 J15	
3221 E1	F229 J15	
3222 E2	F230 J15	
3223 E16	F231 C5	
3224 E16	F232 E4	
3225 E16	I210 B5	
3226 E16	I211 A16	
3227 E16	I213 A13	
3228 G2	I214 C5	
3229 G2	I215 C16	
3230 G2	I216 B15	
3231 G2	I217 D8	
3232 G3	I218 E8	
3233 E16	I220 C15	
3235 E16	I224 C15	
3238 E16	I225 C16	
3239 K4	I230 E4	
3240 K3	I231 E4	

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SSB: PNX2015: Audio Processor

B04C AUDIO PROCESSOR

B04C

7410 L78L08ACU

7411 MSP4450P-VK-E8 000

Φ MULTISTANDARD SOUND PROCESSOR

Item	iTV	EU- with Side AV	AP/CH/LT with Side AV	Description
4403	☐	☑	☑	RST SM 0603 JUMP. 0R05 COL
4406	☐	☑	☑	RST SM 0603 JUMP. 0R05 COL
4407	☑	☑	☐	RST SM 0603 JUMP. 0R05 COL
4408	☑	☑	☐	RST SM 0603 JUMP. 0R05 COL
4411	☑	☑	☐	RST SM 0603 JUMP. 0R05 COL

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1411 B3 I421 D4
2408 A4 I422 D4
2409 A4 I423 E4
2410 A4 I424 E4
2411 A2 I425 F4
2412 A4 I426 A3
2413 A6 I427 C4
2414 B2 I428 C4
2415 B3 I429 C2
2416 B3 I430 C2
2417 B7 I431 D4
2418 B7 I432 D2
2419 C3
2420 C6
2421 C7
2422 C7
2423 C6
2424 D7
2425 D7
2426 D7
2427 D7
2428 D6
2429 D7
2430 D7
2431 D7
2432 D2
2433 D3
2434 E3
2435 E3
2436 E3
2437 F4
2438 F4
2439 A3
2440 A3
2441 A4
2442 A4
2443 A6
2444 A6
2445 E3
2446 C3
2447 C3
3402 A1
3410 C3
3411 C3
3416 E2
3417 D8
3418 D8
3419 D8
3420 D8
4401 A2
4402 A2
4403 E3
4406 F3
4407 C3
4408 C3
4409 D3
4410 D3
4411 D3
4412 D3
5401 A1
5402 B1
5403 E2
7410 A4
7411 B4
F401 A4
F402 A4
F403 A5
I412 C3
I413 C3
I414 C6
I415 C6
I416 D6
I417 D6
I418 D6
I419 D6
I420 D3

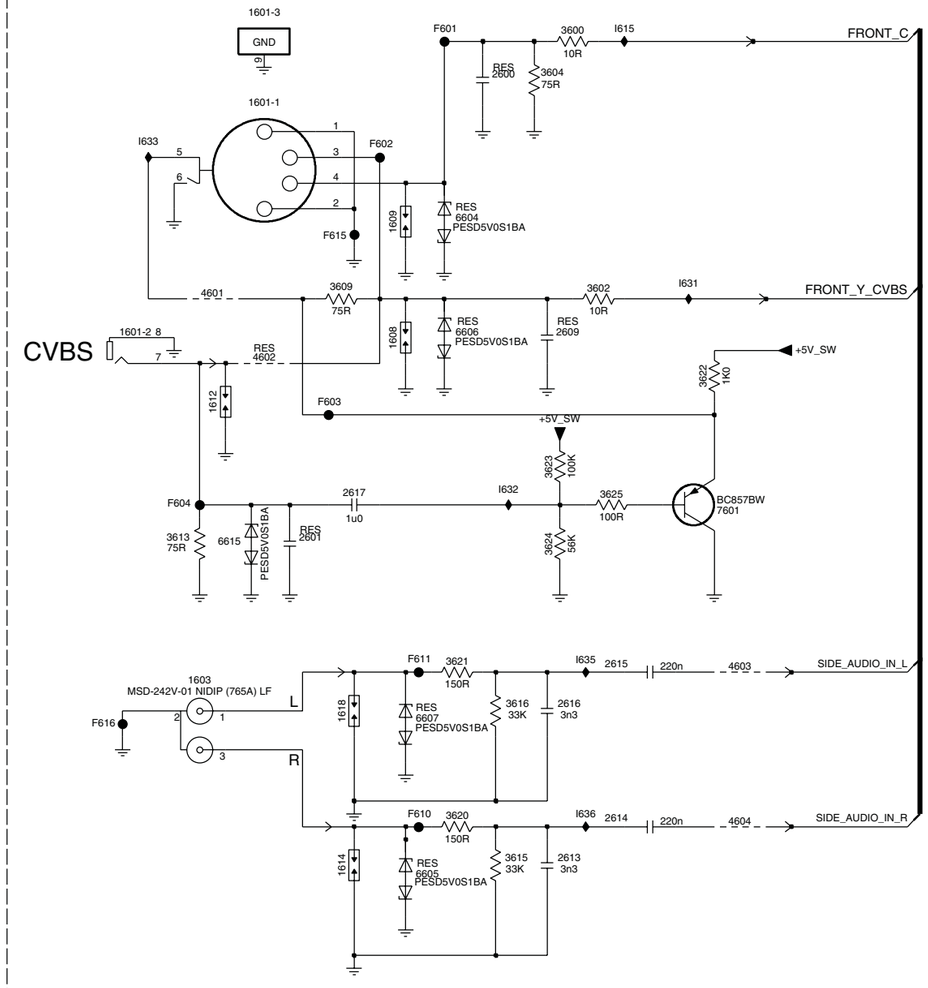
SSB: YPBPR & Rear IO

B06A YPBPR & REAR IO

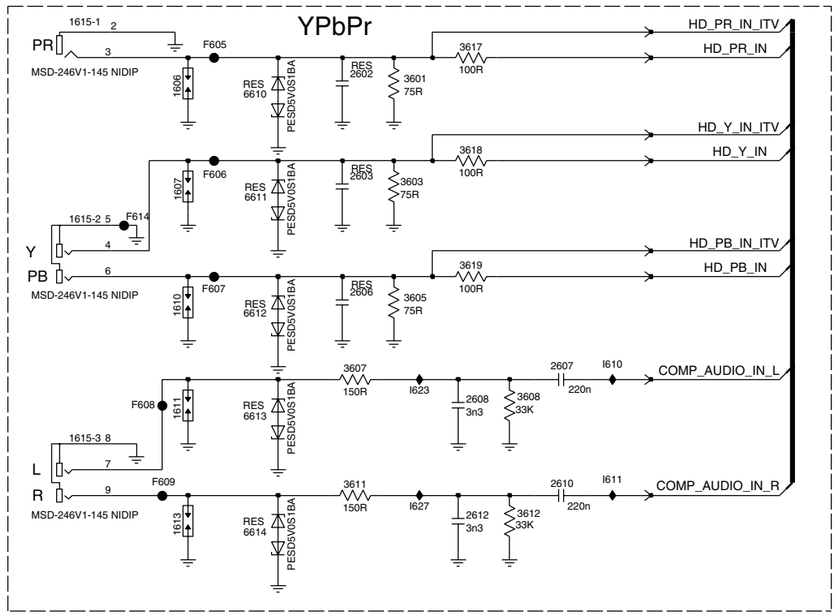
B06A

FOR NON SIDE IO / ITV

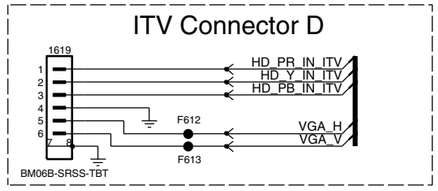
SVHS



YPbPr



ITV Connector D



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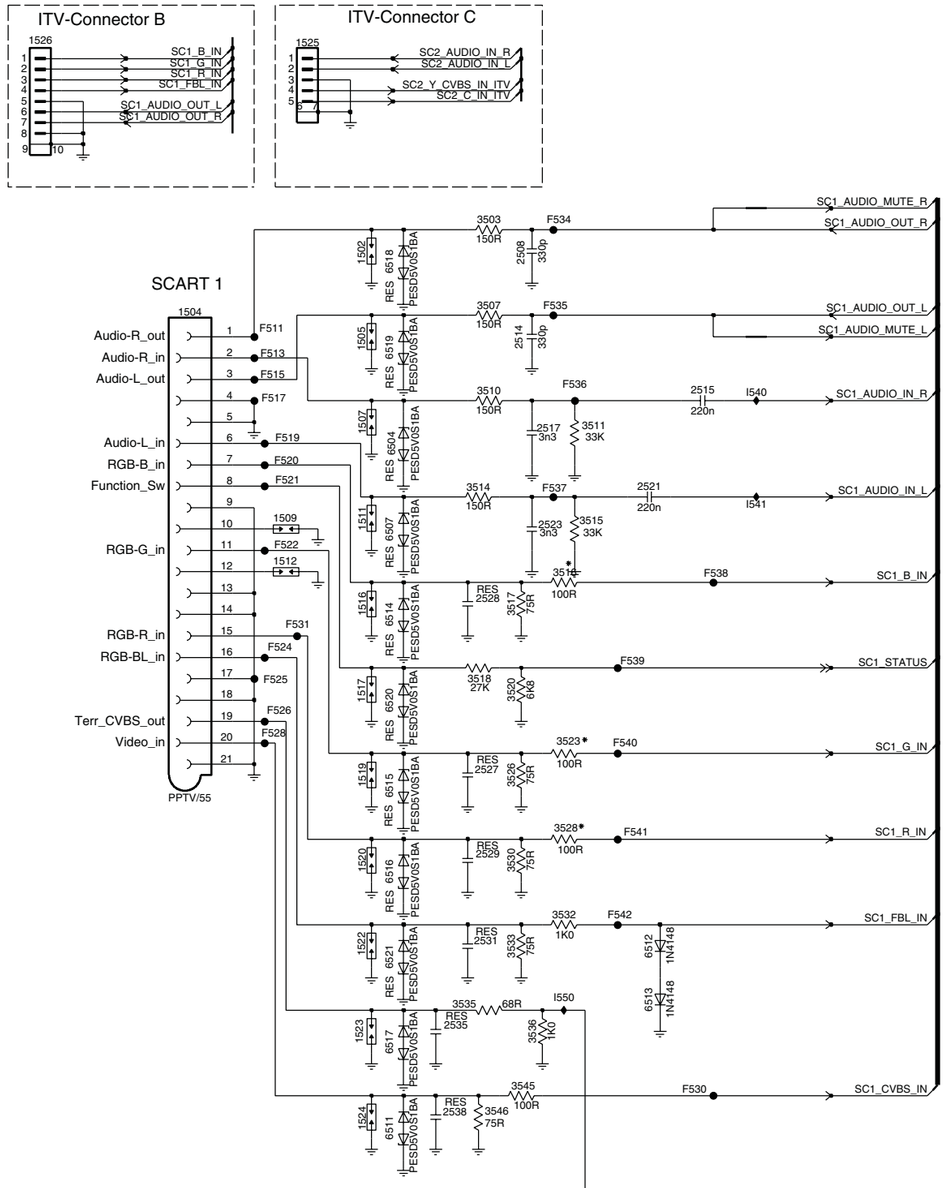
SSB: I/O Scart 1 & 2

B06B IO - SCART 1 & 2

Item	non-iTV	iTV Analog	iTV-Digital	Description
1504	✓	✓		SOC EURO V 21P F BK R-GRND B
1506	✓	✓		SOC EURO V 21P F BK R-GRND B
1525		✓	✓	CON V 5P M 1.00 SM SR R
1526		✓	✓	CON V 8P M 1.00 SM SR R
3516	✓			RST SM 0603 100R PM5 COL
		✓	✓	RST SM 0603 680R PM5 COL
3523	✓			RST SM 0603 100R PM5 COL
		✓	✓	RST SM 0603 680R PM5 COL
3528	✓			RST SM 0603 100R PM5 COL
		✓	✓	RST SM 0603 680R PM5 COL



1500 C9 6522 C10
1501 C9 6523 C10
1502 C3 6524 E10
1503 D9 6525 G9
1504 C2 7500 G10
1505 C3 7502 G11
1506 D8 7503 I11
1507 D3 7504 I11
1508 E9 F510 D9
1509 D2 F511 C2
1510 E9 F512 D9
1511 D3 F513 C2
1512 E2 F514 D9
1513 E9 F515 C2
1514 E9 F516 D9
1515 F9 F517 C2
1516 E3 F518 D9
1517 E3 F519 D2
1518 G9 F520 D2
1519 F3 F521 D2
1520 G3 F522 D2
1521 H9 F523 F9
1522 G3 F524 E2
1523 H3 F525 E2
1524 H3 F526 F2
1525 A2 F527 F9
1526 A1 F528 F2
2502 C10 F529 F9
2506 C10 F530 H5
2508 B4 F531 E2
2509 D12 F532 E9
2512 D10 F534 B4
2514 C4 F535 C4
2515 C5 F536 C4
2517 D4 F537 D4
2518 D12 F538 E5
2520 E10 F539 E4
2521 D5 F540 F4
2523 D4 F541 F5
2524 F10 F542 G4
2525 G10 F543 D11
2526 G10 F544 D11
2527 F4 I510 B11
2528 E4 I512 C11
2529 F4 I517 D12
2530 H10 I520 D12
2531 G4 I528 G12
2533 I11 I530 G10
2534 I10 I533 H12
2535 H3 I540 C5
2536 G10 I541 D5
2538 H3 I543 G10
3500 B10 I544 G12
3502 C10 I545 E11
3503 B4 I548 I11
3506 D10 I549 I11
3507 C4 I550 G4
3508 D11 I551 G10
3510 C4 I552 G11
3511 D4 I553 I11
3512 D10 I554 I12
3513 E11 I556 H12
3514 D4 I557 F12
3515 D4
3516 E4
3517 E4
3518 E3
3519 G10
3520 E4
3521 G12
3522 G10
3523 F4
3524 I11
3525 G10
3526 F4
3528 F4
3529 H10
3530 G4
3531 H10
3532 G4
3533 G4
3535 H3
3536 H4
3537 I12
3538 G11
3540 I12
3545 H4
3546 H4
3550 E10
3551 E10
3552 F11
3553 F11
3554 I12
3555 H12
4502 G11
4504 I12
6501 D10
6504 D3
6505 E10
6507 D3
6509 F10
6510 H9
6511 H3
6512 G5
6513 G5
6514 E3
6515 F3
6516 G3
6517 H3
6518 C3
6519 C3
6520 E3
6521 G3

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SSB: HDMI

B06C HDMI

B06C

HDMI CONNECTOR-1

HDMI CONNECTOR-2

A

B

MAIN

AUDIO DAC

POWER

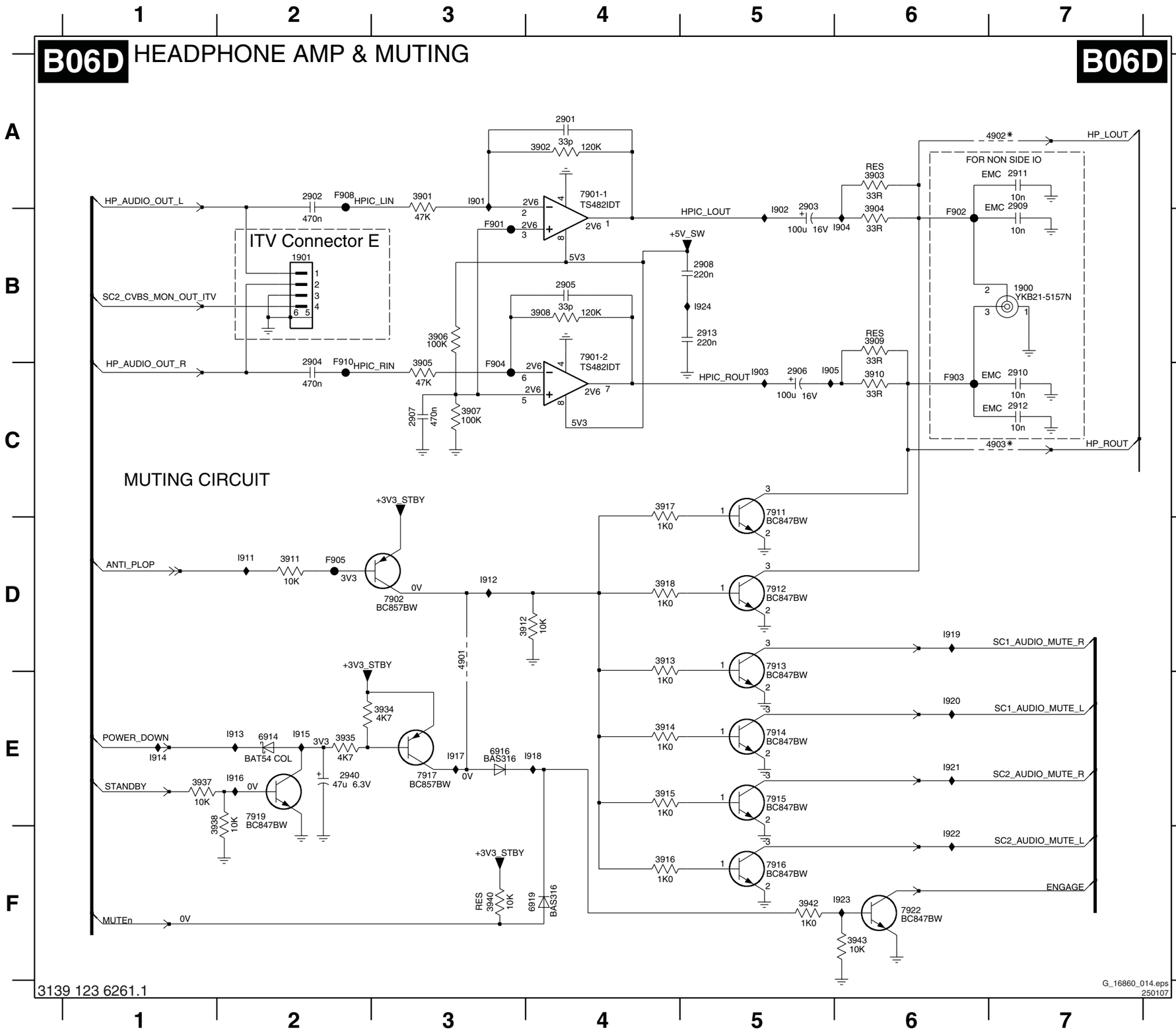
HDMI_Cb(0:7)

HDMI_Y(0:7)

HDMI_Cr(0:7)

1810 A1
1811 D1
1823 H8
2801 G3
2802 H3
2803 C7
2804 A7
2805 G3
2806 H3
2807 H2
2808 H2
2809 H8
2810 H6
2811 H2
2812 I2
2813 H8
2814 I2
2815 I2
2816 B11
2817 B11
2818 C11
2819 B11
2828 H8
2829 B10
2830 B10
2833 B11
2835 B12
2836 B12
2838 B12
2839 B12
2840 B12
2843 B13
2844 B13
2845 B13
2847 C10
2848 C10
2849 C11
2850 C11
2851 C11
2852 C11
2853 C12
2854 C12
2855 C12
2856 C12
2857 C12
2858 C13
2859 C13
2860 C13
2861 C13
2865 C10
2866 C10
2867 C11
2868 C11
2869 C11
2870 C12
2871 C12
2872 C12
2873 C12
2874 C12
2875 C13
2876 C13
3801 C6
3802 C7
3803 G3
3804 G3
3805 I2
3806 I2
3807-1 I5
3807-2 I5
3807-3 I5
3807-4 I5
3809 H5
3810 C6
3811 H8
3815 H8
3819 I8
3828 D7
3830 A6
3831 A6
3832 A7
3833 B7
3834 B7
3835 E11
3846 E7
3850 H7
3851-1 E11
3851-2 E11
3851-3 E11
3851-4 F11
3852-1 F11
3852-2 F11
3852-3 F11
3852-4 F11
3853-1 F11
3853-2 F11
3853-3 G11
3853-4 G11
3854-1 G11
3854-2 G11
3854-3 G11
3854-4 G11
3855-1 H11
3855-2 H11
3855-3 H11
3855-4 H11
3856-1 H11
3856-2 H11
3856-3 H11
3856-4 I11
3857 I11
3858 I11
3859 I11
3860 I11
3862 B2
3863 C2
3864 C2
3877 C3
3880 E2
3881 F2
3882 F2
3883 F3
3884 I6
3885 I7
3886 I7
3896 G5
3897 G5
4802 H6
4803 H6
4804 A6
4805 C6
5810 A11
5811 A11
5812 A11
5813 A12
5814 A12
5815 A13
5816 A13
5817 A10
5818 A13
6801 C5
6802 C5
6830 A5
6831 A5
7810 I3
7811 C5
7812 D7
7813 E7
7814 C2
7816 C3
7817-1 E9
7817-2 D10
7817-3 C9
7824 H5
7825 H7
7850 A5
7851 B7
7852 B7
7860 F2
7861 F3
F601 G3
F802 H4
F805 I12
F806 I12
F832 A1
F840 B1
F841 B1
F842 B1
F843 B1
F850 H6
F851 H7
F861 D1
F869 E1
F870 E1
F871 E1
F872 E1
F873 C6
F874 A6
F875 D13
F876 F6
F877 G6
I801 H2
I802 H2
I803 H3
I804 I2
I805 I2
I806 I2
I813 I12
I814 I12
I820 D7
I821 E7
I822 B7
I823 C7
I828 I6
I831 C2
I833 C2
I840 C3
I841 C3
I842 F3
I843 F3
I844 G6
I845 G6
I846 H8
I847 H9
I848 I8
I850 A10
I851 A11
I852 A11
I853 A12
I854 A12
I855 A13
I856 A13
I857 A13
I858 A11
I861 F2
I862 H9
I863 H3
I864 I7
I865 I7
I866 I7

SSB: Headphone Amp & Muting

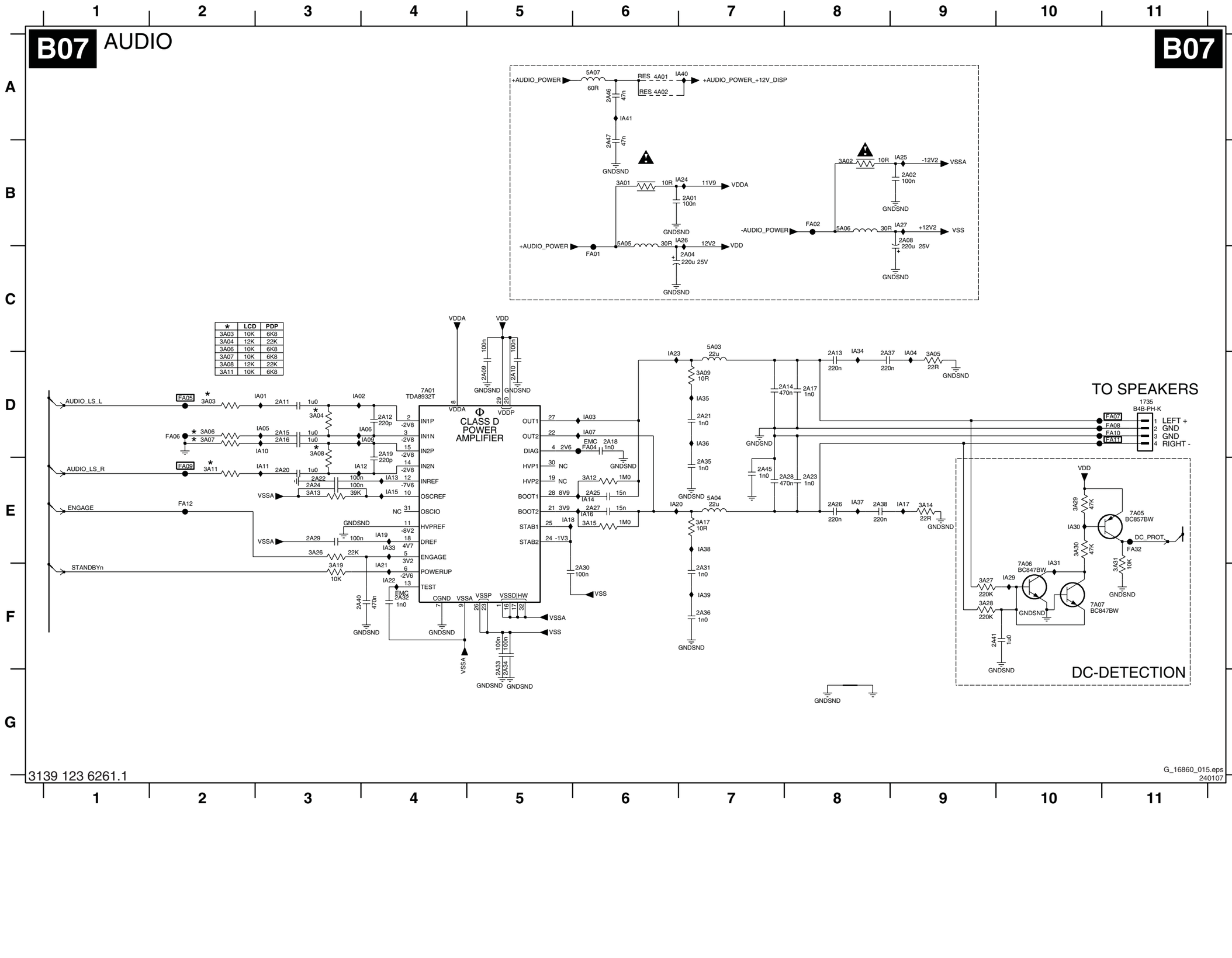


1900 B7 I915 E2
1901 B2 I916 E2
2901 A4 I917 E3
2902 A2 I918 E4
2903 B5 I919 D6
2904 C2 I920 E6
2905 B4 I921 E6
2906 C5 I922 F6
2907 C3 I923 F6
2908 B5 I924 B5
2909 A7
2910 C7
2911 A7
2912 C7
2913 B5
2940 E2
3901 A3
3902 A4
3903 A6
3904 B6
3905 C3
3906 B3
3907 C3
3908 B4
3909 B6
3910 C6
3911 D2
3912 D4
3913 D4
3914 E4
3915 E4
3916 F4
3917 C4
3918 D4
3934 E3
3935 E2
3937 E1
3938 E2
3940 F3
3942 F5
3943 F6
4901 D3
4902 A7
4903 C7
6914 E2
6916 E3
6919 F4
7901-1 A4
7901-2 B4
7902 D3
7911 C5
7912 D5
7913 D5
7914 E5
7915 E5
7916 F5
7917 E3
7919 E2
7922 F6
F901 B3
F902 B6
F903 C6
F904 C3
F905 D2
F908 A2
F910 B2
I901 A3
I902 B5
I903 C5
I904 B6
I905 C5
I911 D2
I912 D3
I913 E2
I914 E1

Item	EU iTV	non-iTV	US iTV	Description
1901	✓	–	✓	CON V 4P M 1.00 SM SR R
2901	✓	✓	–	CER1 0603 NP0 50V 33P COL
2902	✓	✓	–	CER2 0603 Y5V 10V 470N COL
2903	✓	✓	–	ELCAP SM 16V 100U PM20 COL R
2904	✓	✓	–	CER2 0603 Y5V 10V 470N COL
2905	✓	✓	–	CER1 0603 NP0 50V 33P COL
2906	✓	✓	–	ELCAP SM 16V 100U PM20 COL R
2907	✓	✓	–	CER2 0603 Y5V 10V 470N COL
2909	✓	–	–	CER2 0603 X7R 50V 10N COL
2910	✓	–	–	CER2 0603 X7R 50V 10N COL
2911	✓	–	–	CER2 0603 X7R 50V 10N COL
2912	✓	–	–	CER2 0603 X7R 50V 10N COL
3901	✓	✓	–	RST SM 0603 47K PM5 COL
3902	✓	✓	–	RST SM 0603 RC21 120K PM5 R
3904	✓	✓	–	RST SM 0603 33R PM5 COL
3905	✓	✓	–	RST SM 0603 47K PM5 COL
3906	✓	✓	–	RST SM 0603 100K PM5 COL
3907	✓	✓	–	RST SM 0603 100K PM5 COL
3908	✓	✓	–	RST SM 0603 RC21 120K PM5 R
3910	✓	✓	–	RST SM 0603 33R PM5 COL
3917	✓	✓	–	RST SM 0603 1K PM5 COL
3918	✓	✓	–	RST SM 0603 1K PM5 COL
4902	–	✓	–	RST SM 0603 JUMP. 0R05 COL
4903	–	✓	–	RST SM 0603 JUMP. 0R05 COL
7901	✓	✓	–	IC SM TS482ID (ST00) R
7911	✓	✓	–	TRA SIG SM BC847BW (COL) R
7912	✓	✓	–	TRA SIG SM BC847BW (COL) R

SSB: Audio

B07 AUDIO



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1735 D11 IA02 D3
2A01 B7 IA03 D6
2A02 B9 IA04 D9
2A04 C7 IA05 D3
2A08 B9 IA06 D4
2A09 D5 IA07 D6
2A10 D5 IA09 D4
2A11 D3 IA10 D3
2A12 D4 IA11 E3
2A13 D8 IA12 E3
2A14 D8 IA13 E4
2A15 D3 IA14 E6
2A16 D3 IA15 E4
2A17 D8 IA16 E6
2A18 D6 IA17 E9
2A19 D4 IA18 E5
2A20 E3 IA19 E4
2A21 D7 IA20 E6
2A22 E3 IA21 F4
2A23 E8 IA22 F4
2A24 E3 IA23 D6
2A25 E6 IA24 B7
2A26 E8 IA25 B9
2A27 E6 IA26 B7
2A28 E8 IA27 B9
2A29 E3 IA29 F10
2A30 F6 IA30 E10
2A31 F7 IA31 E10
2A32 F4 IA33 E4
2A33 F5 IA34 C8
2A34 F5 IA35 D7
2A35 E7 IA36 D7
2A36 F7 IA37 E8
2A37 D8 IA38 E7
2A38 E8 IA39 F7
2A40 F3 IA40 A7
2A41 F9 IA41 A6
2A45 E7
2A46 A6
2A47 B6
3A01 B6
3A02 B8
3A03 D2
3A04 D3
3A05 D9
3A06 D2
3A07 D2
3A08 D3
3A09 D7
3A11 E2
3A12 E6
3A13 E3
3A14 E9
3A15 E6
3A17 E7
3A19 F3
3A26 E3
3A27 F9
3A28 F9
3A29 E10
3A30 E10
3A31 F11
4A01 A6
4A02 A6
5A03 C7
5A04 E7
5A05 B6
5A06 B8
5A07 A6
7A01 D4
7A05 E11
7A06 F10
7A07 F10
FA01 C6
FA02 B8
FA04 D6
FA05 D2
FA06 D2
FA07 D11
FA08 D11
FA09 E2
FA10 D11
FA11 D11
FA12 E2
FA32 E11
IA01 D3

SSB: SRP List

1.1. Introduction

SRP (Service Reference Protocol) is a software tool that creates a list with all references to signal lines. The list contains references to the signals within all schematics of a PWB. It replaces the text references currently printed next to the signal names in the schematics. These printed references are created manually and are therefore not guaranteed to be 100% correct. In addition, in the current crowded schematics there is often none or very little place for these references.
Some of the PWB schematics will use SRP while others will still use the manual references. Either there will be an SRP reference list for a schematic, or there will be printed references in the schematic.

1.2. Non-SRP Schematics

There are several different signals available in a schematic:

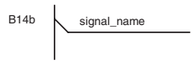
1.2.1. Power Supply Lines

All power supply lines are available in the supply line overview (see chapter 6). In the schematics (see chapter 7) is not indicated where supplies are coming from or going to.
It is however indicated if a supply is incoming (created elsewhere), or outgoing (created or adapted in the current schematic).

Outgoing Incoming

1.2.2. Normal Signals

For normal signals, a schematic reference (e.g. B14b) is placed next to the signals.



1.2.3. Grounds

For normal and special grounds (e.g. GNDHOT or GND3V3 etc.), nothing is indicated.

1.3. SRP Schematics

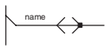
SRP is a tool, which automatically creates a list with signal references, indicating on which schematic the signals are used.
A reference is created for all signals indicated with an SRP symbol, these symbols are:

Power supply line.

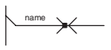
Stand alone signal or switching line (used as less as possible).

Signal line into a wire tree.

Switching line into a wire tree.



Bi-directional line (e.g. SDA) into a wire tree.



Signal line into a wire tree, its direction depends on the circuit (e.g. ingoing for PDP, outgoing for LCD sets).

Remarks:

- When there is a black dot on the "signal direction arrow" it is an SRP symbol, so there will be a reference to the signal name in the SRP list.
- All references to normal grounds (Ground symbols without additional text) are not listed in the reference list, this to keep it concise.
- Signals that are not used in multiple schematics, but only once or several times in the same schematic, are included in the SRP reference list, but only with one reference.

Additional Tip:

When using the PDF service manual file, you can very easily search for signal names and follow the signal over all the schematics. In Adobe PDF reader:

- Select the signal name you want to search for, with the "Select text" tool.
- Copy and paste the signal name in the "Search PDF" tool.
- Search for all occurrences of the signal name.
- Now you can quickly jump between the different occurrences and follow the signal over all schematics. It is advised to "zoom in" to e.g. 150% to see clearly, which text is selected. Then you can zoom out, to get an overview of the complete schematic.

PS. It is recommended to use at least Adobe PDF (reader) version 6.x, due to better search possibilities in this version.

Netname	Schematic
+12V_DISP	B02 (1x)
+12V_DISP	B04A (1x)
+12V_DISP	B04B (1x)
+1V2_MOJO	B02 (1x)
+1V2_MOJO	B03D (2x)
+1V8S_SW	B02 (1x)
+1V8S_SW	B03B (2x)
+1V8S_SW	B03F (1x)
+1V8S_SW	B04B (3x)
+1V8S_SW	B06C (3x)
+3V3	B03B (3x)
+3V3	B03C (3x)
+3V3	B03D (8x)
+3V3	B03E (2x)
+3V3	B03F (1x)
+3V3_BUF	B03C (4x)
+3V3_CORE	B03C (2x)
+3V3_MOJO	B02 (1x)
+3V3_MOJO	B03F (2x)
+3V3_NOR48	B03E (4x)
+3V3_STBY	B02 (1x)
+3V3_STBY	B04A (30x)
+3V3_STBY	B06D (3x)
+3V3_STV	B03C (10x)
+3V3_SW	B02 (1x)
+3V3_SW	B04A (8x)
+3V3_SW	B04B (13x)
+3V3_SW	B06C (19x)
+3V3_VDDP	B03D (3x)
+3V3clean	B03D (1x)
+3V3clean	B03F (1x)
+3V3FE	B03B (5x)
+5V_AUD	B04C (3x)
+5V_D	B04C (2x)
+5V_IF	B03A (4x)
+5V_STANDBY	B02 (4x)
+5V_STANDBY	B04A (4x)
+5V_STANDBY	B04B (2x)
+5V_SW	B02 (6x)
+5V_SW	B03A (4x)
+5V_SW	B03B (9x)
+5V_SW	B03C (2x)
+5V_SW	B03E (3x)
+5V_SW	B04A (1x)
+5V_SW	B04B (2x)
+5V_SW	B04C (2x)
+5V_SW	B06A (2x)
+5V_SW	B06B (2x)
+5V_SW	B06D (1x)
+5VHDMI_A	B06C (3x)
+5VHDMI_B	B06C (3x)
+5VS	B03A (3x)
+8V	B04C (2x)
+AUDIO_POWER	B02 (1x)
+AUDIO_POWER	B04C (1x)
+AUDIO_POWER	B06A (1x)
+AUDIO_POWER	B07 (1x)
+IO_POWER	B06A (10x)
+IO_POWER	B06B (7x)
+VTUN	B02 (1x)
+VTUN	B03A (1x)
+VTUN	B04A (1x)
10046_TDO	B03B (1x)
10046_TDO	B03D (1x)
4MHZ_CLK	B03A (1x)
4MHZ_CLK	B03B (1x)
4MHz_MOJO	B03B (1x)
4MHz_MOJO	B03D (1x)
A(0)	B04A (1x)
A(0)	B04B (1x)
A(0:7)	B04A (1x)
A(0:7)	B04B (1x)
A(1)	B04A (2x)
A(1)	B04B (1x)
A(1:7)	B04A (1x)
A(10)	B04A (2x)
A(11)	B04A (2x)
A(12)	B04A (2x)
A(13)	B04A (2x)
A(14)	B04A (2x)
A(15)	B04A (2x)
A(16)	B04A (2x)
A(17)	B04A (2x)
A(18)	B04A (2x)
A(19)	B04A (2x)
A(2)	B04A (2x)
A(2)	B04B (1x)
A(3)	B04A (2x)
A(3)	B04B (1x)
A(4)	B04A (2x)
A(4)	B04B (1x)
A(5)	B04A (2x)
A(5)	B04B (1x)
A(6)	B04A (2x)
A(6)	B04B (1x)
A(7)	B04A (2x)
A(7)	B04B (1x)
A(8)	B04A (2x)
A(8:19)	B04A (2x)
A(9)	B04A (2x)
A_MICLK	B03C (1x)
A_MISTRT	B03C (1x)
A_MIVAL	B03C (1x)
A_MOCLK	B03C (1x)
A_MOSTRT	B03C (1x)
A_MOVAL	B03C (1x)
AD(0)	B04A (2x)
AD(0)	B04B (1x)
AD(0:7)	B04A (2x)
AD(0:7)	B04B (1x)
AD(1)	B04A (2x)
AD(1)	B04B (1x)
AD(2)	B04A (2x)
AD(2)	B04B (1x)
AD(3)	B04A (2x)
AD(3)	B04B (1x)
AD(4)	B04A (2x)
AD(4)	B04B (1x)
AD(5)	B04A (2x)
AD(5)	B04B (1x)
AD(6)	B04A (2x)
AD(6)	B04B (1x)
AD(7)	B04A (2x)
AD(7)	B04B (1x)
ALE_EMU	B04A (1x)
ALE_EMU	B04B (1x)
ANTI_PLOP	B04A (1x)
ANTI_PLOP	B06D (1x)
AUDIO_LS_L	B04C (1x)
AUDIO_LS_L	B07 (1x)
AUDIO_LS_R	B04C (1x)
AUDIO_LS_R	B07 (1x)
-AUDIO_POWER	B02 (1x)
-AUDIO_POWER	B07 (1x)
BACKLIGHT_BOOST	B02 (1x)
BACKLIGHT_BOOST	B04A (1x)
BL_ADJUST	B02 (1x)
BL_ADJUST	B04A (1x)
BL_ADJUST	B04B (1x)
BL_ON_OFF	B02 (1x)
BL_ON_OFF	B04A (1x)
BOLT_ON_SCL	B04A (2x)
BOLT_ON_SDA	B04A (2x)
CE	B04A (1x)
COMP_AUDIO_IN_L	B04C (1x)
COMP_AUDIO_IN_L	B06A (1x)
COMP_AUDIO_IN_R	B04C (1x)
COMP_AUDIO_IN_R	B06A (1x)
CPU_RST	B04A (1x)
CS	B04A (1x)
CS	B04B (1x)
CTRL_DISP1	B04B (2x)
CTRL_DISP1_up	B04A (1x)
CTRL_DISP1_up	B04B (1x)
CTRL_DISP2	B04B (2x)
CTRL_DISP3	B04B (2x)
CTRL_DISP4	B04B (2x)
CTRL_DISP4_up	B04A (1x)
CTRL_DISP4_up	B04B (1x)
CVBS_RF	B03A (1x)
CVBS_RF	B04B (1x)
CX_AVDD_ADC1	B04B (2x)
CX_AVDD_ADC2	B04B (2x)
CX_AVDD_ADC3	B04B (2x)
CX_AVDD_ADC4	B04B (2x)
CX_AVDD3_ADC1	B04B (2x)
CX_AVDD3_ADC2	B04B (2x)
CX_AVDD3_BG_ASS	B04B (2x)
CX_AVDD3_OUTBUF	B04B (2x)
CX_PAVDD	B04B (2x)
CX_PAVDD1	B04B (2x)
CX_PAVDD2	B04B (2x)
CX_PDVDD	B04B (2x)
DC_PROT	B04A (1x)
DC_PROT	B07 (1x)
DDC_RESET	B04A (1x)
DDC_RESET	B06C (2x)
DVB_SW	B03A (1x)
DVB_SW	B04A (1x)
E_PAGE	B04A (1x)
ENGAGE	B06D (1x)
ENGAGE	B07 (1x)
FE_LOCK	B03B (1x)
FE_LOCK	B03D (1x)
FRONT_C_IN	B04B (1x)
FRONT_C_IN	B06A (1x)
FRONT_Y_CVBS_IN	B04B (1x)
FRONT_Y_CVBS_IN	B06A (1x)
GNDDC	B02 (1x)
GNDSND	B02 (3x)
GNDSND	B07 (21x)
GNDTUN	B02 (1x)
HD_PB_IN	B04B (1x)
HD_PB_IN	B06A (2x)
HD_PR_IN	B04B (1x)
HD_PR_IN	B06A (2x)
HD_Y_IN	B04B (1x)
HD_Y_IN	B06A (2x)
HDMI_AUDIO_IN_L	B04C (1x)
HDMI_AUDIO_IN_L	B06C (1x)
HDMI_AUDIO_IN_R	B04C (1x)
HDMI_AUDIO_IN_R	B06C (1x)
HDMI_Cb(0)	B04B (1x)
HDMI_Cb(0)	B06C (1x)
HDMI_Cb(0:7)	B04B (1x)
HDMI_Cb(0:7)	B06C (1x)
HDMI_Cb(1)	B04B (1x)
HDMI_Cb(1)	B06C (1x)
HDMI_Cb(2)	B04B (1x)
HDMI_Cb(2)	B06C (1x)
HDMI_Cb(3)	B04B (1x)
HDMI_Cb(3)	B06C (1x)
HDMI_Cb(4)	B04B (1x)
HDMI_Cb(4)	B06C (1x)
HDMI_Cb(5)	B04B (1x)
HDMI_Cb(5)	B06C (1x)
HDMI_Cb(6)	B04B (1x)
HDMI_Cb(6)	B06C (1x)
HDMI_Cb(7)	B04B (1x)
HDMI_Cb(7)	B06C (1x)
HDMI_Cr(0)	B04B (1x)
HDMI_Cr(0)	B06C (1x)
HDMI_Cr(0:7)	B04B (1x)
HDMI_Cr(0:7)	B06C (1x)
HDMI_Cr(1)	B04B (1x)
HDMI_Cr(1)	B06C (1x)
HDMI_Cr(2)	B04B (1x)
HDMI_Cr(2)	B06C (1x)
HDMI_Cr(3)	B04B (1x)
HDMI_Cr(3)	B06C (1x)
HDMI_Cr(4)	B04B (1x)
HDMI_Cr(4)	B06C (1x)
HDMI_Cr(5)	B04B (1x)
HDMI_Cr(5)	B06C (1x)
HDMI_Cr(6)	B04B (1x)
HDMI_Cr(6)	B06C (1x)
HDMI_Cr(7)	B04B (1x)
HDMI_Cr(7)	B06C (1x)
HDMI_DE	B04B (1x)
HDMI_DE	B06C (1x)
HDMI_H	B04B (1x)
HDMI_H	B06C (1x)
HDMI_HOTPLUG_RESET	B04A (1x)
HDMI_HOTPLUG_RESET	B06C (2x)
HDMI_INT	B04A (1x)
HDMI_INT	B06C (1x)
HDMI_V	B04B (1x)
HDMI_V	B06C (1x)
HDMI_VCLK	B04B (1x)
HDMI_VCLK	B06C (1x)
HDMI_Y(0)	B04B (1x)
HDMI_Y(0)	B06C (1x)
HDMI_Y(0:7)	B04B (1x)
HDMI_Y(0:7)	B06C (1x)
HDMI_Y(1)	B04B (1x)
HDMI_Y(1)	B06C (1x)
HDMI_Y(2)	B04B (1x)
HDMI_Y(2)	B06C (1x)
HDMI_Y(3)	B04B (1x)
HDMI_Y(3)	B06C (1x)
HDMI_Y(4)	B04B (1x)
HDMI_Y(4)	B06C (1x)
HDMI_Y(5)	B04B (1x)
HDMI_Y(5)	B06C (1x)
HDMI_Y(6)	B04B (1x)
HDMI_Y(6)	B06C (1x)
HDMI_Y(7)	B04B (1x)
HDMI_Y(7)	B06C (1x)
HP_AUDIO_OUT_L	B04C (1x)
HP_AUDIO_OUT_L	B06D (1x)
HP_AUDIO_OUT_R	B04C (1x)
HP_AUDIO_OUT_R	B06D (1x)
I2C_LOCAL_SCL	B03B (1x)
I2C_LOCAL_SCL	B03C (1x)
I2C_LOCAL_SCL	B03D (1x)
I2C_LOCAL_SCL	B03E (1x)
I2C_LOCAL_SDA	B03B (1x)
I2C_LOCAL_SDA	B03C (1x)
I2C_LOCAL_SDA	B03D (1x)
I2C_LOCAL_SDA	B03E (1x)
I2C_TDA_SCL	B03A (1x)
I2C_TDA_SCL	B03B (1x)
I2C_TDA_SDA	B03A (1x)
I2C_TDA_SDA	B03B (1x)
IBO_B_IN	B03F (1x)
IBO_B_IN	B04B (1x)
IBO_CVBS_IN	B03F (1x)
IBO_CVBS_IN	B04B (1x)
IBO_G_IN	B03F (1x)
IBO_G_IN	B04B (1x)
IBO_IRQ	B03D (1x)
IBO_IRQ	B04A (1x)
IBO_R_IN	B03F (1x)
IBO_R_IN	B04B (1x)
IF_AGC_IBO	B03A (1x)
IF_AGC_IBO	B03B (1x)
IF_ATV	B03A (2x)
IIC_SCL	B03A (2x)
IIC_SCL	B03D (1x)
IIC_SCL	B04A (1x)
IIC_SCL	B04B (2x)
IIC_SCL	B04C (1x)
IIC_SCL	B06C (1x)
IIC_SCL_up	B04A (2x)
IIC_SDA	B03A (2x)
IIC_SDA	B03D (1x)
IIC_SDA	B04A (1x)
IIC_SDA	B04B (2x)
IIC_SDA	B04C (1x)
IIC_SDA	B06C (1x)
IIC_SDA_up	B04A (2x)
INT	B04A (1x)
INT	B04B (1x)
ISP	B04A (1x)
ITV_SPI_CLK	B04A (2x)
ITV_SPI_DATA_IN	B04A (2x)
JTAG_TCK	B03B (1x)
JTAG_TCK	B03C (1x)
JTAG_TCK	B03D (1x)
JTAG_TMS	B03B (1x)
JTAG_TMS	B03C (1x)
JTAG_TMS	B03D (1x)
JTAG_TRST	B03B (1x)
JTAG_TRST	B03C (1x)
JTAG_TRST	B03D (1x)
KEYB	B04A (2x)
LCD_PWR_ON	B04A (1x)
LCD_PWR_ON	B04B (1x)
LED1	B04A (2x)
LED2	B04A (2x)
LIGHT_SENSOR	B04A (2x)
MIU_ADDR(0)	B03C (1x)
MIU_ADDR(0)	B03D (1x)
MIU_ADDR(0:24)	B03D (1x)
MIU_ADDR(1)	B03C (1x)
MIU_ADDR(1)	B03D (1x)
MIU_ADDR(1)	B03E (1x)
MIU_ADDR(10)	B03D (1x)
MIU_ADDR(10)	B03E (1x)
MIU_ADDR(11)	B03C (1x)
MIU_ADDR(11)	B03D (1x)
MIU_ADDR(11)	B03E (1x)
MIU_ADDR(12)	B03C (1x)
MIU_ADDR(12)	B03D (1x)
MIU_ADDR(12)	B03E (1x)
MIU_ADDR(13)	B03C (1x)
MIU_ADDR(13)	B03D (1x)
MIU_ADDR(13)	B03E (1x)
MIU_ADDR(14)	B03C (1x)
MIU_ADDR(14)	B03D (1x)
MIU_ADDR(14)	B03E (1x)
MIU_ADDR(15)	B03C (1x)
MIU_ADDR(15)	B03D (1x)
MIU_ADDR(15)	B03E (1x)
MIU_ADDR(16)	B03C (1x)
MIU_ADDR(16)	B03D (1x)
MIU_ADDR(16)	B03E (1x)
MIU_ADDR(17)	B03C (1x)
MIU_ADDR(17)	B03D (1x)
MIU_ADDR(17)	B03E (1x)
MIU_ADDR(18)	B03C (1x)
MIU_ADDR(18)	B03D (1x)
MIU_ADDR(18)	B03E (1x)
MIU_ADDR(19)	B03C (1x)
MIU_ADDR(19)	B03D (1x)
MIU_ADDR(19)	B03E (1x)
MIU_ADDR(2)	B03C (1x)
MIU_ADDR(2)	B03D (1x)
MIU_ADDR(2)	B03E (1x)
MIU_ADDR(20)	B03C (1x)
MIU_ADDR(20)	B03D (1x)
MIU_ADDR(20)	B03E (1x)
MIU_ADDR(21)	B03C (1x)
MIU_ADDR(21)	B03D (1x)
MIU_ADDR(21)	B03E (1x)
MIU_ADDR(22)	B03C (1x)
MIU_ADDR(22)	B03D (1x)
MIU_ADDR(22)	B03E (1x)
MIU_ADDR(23)	B03C (1x)
MIU_ADDR(23)	B03D (1x)
MIU_ADDR(24)	B03C (1x)
MIU_ADDR(24)	B03D (1x)
MIU_ADDR(3)	B03C (1x)
MIU_ADDR(3)	B03D (1x)
MIU_ADDR(3)	B03E (1x)
MIU_ADDR(4)	B03C (1x)
MIU_ADDR(4)	B03D (1x)
MIU_ADDR(4)	B03E (1x)
MIU_ADDR(5)	B03C (1x)
MIU_ADDR(5)	B03D (1x)
MIU_ADDR(5)	B03E (1x)
MIU_ADDR(6)	B03C (1x)
MIU_ADDR(6)	B03D (1x)
MIU_ADDR(6)	B03E (1x)
MIU_ADDR(7)	B03C (1x)
MIU_ADDR(7)	B03D (1x)
MIU_ADDR(7)	B03E (1x)
MIU_ADDR(8)	B03C (1x)
MIU_ADDR(8)	B03D (1x)
MIU_ADDR(8)	B03E (1x)
MIU_ADDR(9)	B03C (1x)
MIU_ADDR(9)	B03D (1x)
MIU_ADDR(9)	B03E (1x)
MIU_DATA(0)	B03C (1x)
MIU_DATA(0)	B03D (1x)
MIU_DATA(0)	B03E (1x)
MIU_DATA(0:15)	B03D (1x)
MIU_DATA(0:15)	B03E (1x)
MIU_DATA(1)	B03C (1x)
MIU_DATA(1)	B03D (1x)
MIU_DATA(1)	B03E (1x)
MIU_DATA(10)	B03D (1x)
MIU_DATA(10)	B03E (1x)
MIU_DATA(11)	B03D (1x)
MIU_DATA(11)	B03E (1x)
MIU_DATA(12)	B03D (1x)
MIU_DATA(12)	B03E (1x)
MIU_DATA(13)	B03D (1x)
MIU_DATA(13)	B03E (1x)
MIU_DATA(14)	B03D (1x)
MIU_DATA(14)	B03E (1x)
MIU_DATA(15)	B03D (1x)
MIU_DATA(15)	B03E (1x)
MIU_DATA(2)	B03C (1x)
MIU_DATA(2)	B03D (1x)
MIU_DATA(2)	B03E (1x)
MIU_DATA(3)	B03C (1x)
MIU_DATA(3)	B03D (1x)
MIU_DATA(3)	B03E (1x)
MIU_DATA(4)	B03C (1x)
MIU_DATA(4)	B03D (1x)
MIU_DATA(4)	B03E (1x)
MIU_DATA(5)	B03C (1x)
MIU_DATA(5)	B03D (1x)
MIU_DATA(5)	B03E (1x)
MIU_DATA(6)	B03C (1x)
MIU_DATA(6)	B03D (1x)
MIU_DATA(6)	B03E (1x)
MIU_DATA(7)	B03C (1x)
MIU_DATA(7)	B03D (1x)
MIU_DATA(7)	B03E (1x)
MIU_DATA(8)	B03C (1x)
MIU_DATA(8)	B03D (1x)
MIU_DATA(8)	B03E (1x)
MIU_DATA(9)	B03C (1x)
MIU_DATA(9)	B03D (1x)
MIU_DATA(9)	B03E (1x)
MIU_OEN	B03C (1x)
MIU_OEN	B03D (1x)
MIU_OEN	B03E (1x)
MIU_RDY	B03C (1x)
MIU_RDY	B03D (1x)
MIU_WEN	B03C (1x)
MIU_WEN	B03D (1x)
MIU_WEN	B03E (1x)
MOJO_I2S_OUT_SCK	B03D (1x)
MOJO_I2S_OUT_SCK	B04C (1x)
MOJO_I2S_OUT_SD	B03D (1x)
MOJO_I2S_OUT_SD	B04C (1x)
MOJO_I2S_OUT_WS	B03D (1x)
MOJO_I2S_OUT_WS	B04C (1x)
MUTEn	B04A (1x)
MUTEn	B06D (1x)
NOR_CS	B03D (1x)
NOR_CS	B03E (1x)
NOR_RYBY	B03D (1x)
NOR_RYBY	B03E (1x)
NOR_WP	B03D (1x)
NOR_WP	B03E (1x)
PCMCIA_5V	B03C (4x)
PCMCIA_AVCC	B03C (3x)
PCMCIA_VPP	B03C (3x)
POWER_DOWN	B02 (1x)
POWER_DOWN	B04A (1x)
POWER_DOWN	B06D (1x)
RD	B04A (1x)
RD	B04B (1x)
REMOTE	B04A (3x)
RESET_FE_n	B03B (1x)
RESET_FE_n	B03D (1x)
RESET_n	B03D (1x)
RESET_n	B03E (1x)
RESET_STV	B03C (1x)
RESET_STV	B03D (1x)
RF_AGC	B03A (2x)
RF_AGC_IBO	B03A (1x)
RF_AGC_IBO	B03B (1x)
RST	B04A (1x)
RST	B06C (1x)
RST_AUD	B04A (1x)
RST_AUD	B04C (1x)
RST_H	B04A (1x)
RST_H	B04B (1x)
RXD0	B03D (1x)
RXD0	B03F (1x)
SAW_SW	B03A (1x)
SAW_SW	B04A (1x)
SC1_AUDIO_IN_L	B04C (1x)
SC1_AUDIO_IN_L	B06B (1x)
SC1_AUDIO_IN_R	B04C (1x)
SC1_AUDIO_IN_R	B06B (1x)
SC1_AUDIO_MUTE_L	B06B (1x)
SC1_AUDIO_MUTE_L	B06D (1x)
SC1_AUDIO_MUTE_R	B06B (1x)
SC1_AUDIO_MUTE_R	B06D (1x)
SC1_AUDIO_OUT_L	B04C (1x)
SC1_AUDIO_OUT_L	B06B (2x)
SC1_AUDIO_OUT_R	B04C (1x)
SC1_AUDIO_OUT_R	B06B (2x)
SC1_B_IN	B04B (1x)
SC1_B_IN	B06B (2x)
SC1_CVBS_IN	B04B (1x)
SC1_CVBS_IN	B06B (1x)
SC1_CVBS_RF_OUT	B04A (1x)
SC1_CVBS_RF_OUT	B06B (1x)
SC1_FBL_IN	B04B (1x)
SC1_FBL_IN	B06B (2x)
SC1_G_IN	B04B (1x)
SC1_G_IN	B06B (2x)
SC1_R_IN	B04B (1x)
SC1_R_IN	B06B (2x)
SC1_RF_OUT_CVBS	B04B (1x)
SC1_RF_OUT_CVBS	B06B (1x)
SC1_STATUS	B04A (1x)
SC1_STATUS	B06B (1x)
SC2_AUDIO_IN_L	B04C (1x)
SC2_AUDIO_IN_L	B06B (2x)
SC2_AUDIO_IN_R	B04C (1x)
SC2_AUDIO_IN_R	B06B (2x)
SC2_AUDIO_MUTE_L	B06B (1x)
SC2_AUDIO_MUTE_L	B06D (1x)
SC2_AUDIO_MUTE_R	B06B (1x)
SC2_AUDIO_MUTE_R	B06D (1x)
SC2_AUDIO_OUT_L	B04C (1x)
SC2_AUDIO_OUT_L	B06B (1x)
SC2_AUDIO_OUT_R	B04C (1x)
SC2_AUDIO_OUT_R	B06B (1x)
SC2_C_IN	B04B (1x)
SC2_C_IN	B06B (2x)
SC2_CVBS_MON_OUT	B04B (1x)
SC2_CVBS_MON_OUT	B06B (1x)
SC2_CVBS_MON_OUT	B06D (1x)
SC2_STATUS	B04A (1x)
SC2_STATUS	B06B (1x)
SC2_Y_CVBS_IN	B04B (1x)
SC2_Y_CVBS_IN	B06B (2x)
SDRAM_ADDR(0)	B03D (1x)
SDRAM_ADDR(0)	B03E (1x)
SDRAM_ADDR(0:14)	B03D (1x)
SDRAM_ADDR(1)	B03D (1x)
SDRAM_ADDR(1)	B03E (1x)
SDRAM_ADDR(10)	B03D (1x)
SDRAM_ADDR(10)	B03E (1x)
SDRAM_ADDR(11)	B03D (1x)
SDRAM_ADDR(11)	B03E (1x)
SDRAM_ADDR(12)	B03D (1x)
SDRAM_ADDR(12)	B03E (1x)
SDRAM_ADDR(13)	B03D (1x)
SDRAM_ADDR(13)	B03E (1x)
SDRAM_ADDR(14)	B03D (1x)
SDRAM_ADDR(14)	B03E (1x)
SDRAM_ADDR(2)	B03D (1x)
SDRAM_ADDR(2)	B03E (1x)
SDRAM_ADDR(3)	B03D (1x)
SDRAM_ADDR(3)	B03E (1x)
SDRAM_ADDR(4)	B03D (1x)
SDRAM_ADDR(4)	B03E (1x)
SDRAM_ADDR(5)	B03D (1x)
SDRAM_ADDR(5)	B03E (1x)
SDRAM_ADDR(6)	B03D (1x)
SDRAM_ADDR(6)	B03E (1x)
SDRAM_ADDR(7)	B03D (1x)
SDRAM_ADDR(7)	B03E (1x)
SDRAM_ADDR(8)	B03D (1x)
SDRAM_ADDR(8)	B03E (1x)
SDRAM_ADDR(9)	B03D (1x)
SDRAM_ADDR(9)	B03E (1x)
SDRAM_DQM0	B03D (1x)
SDRAM_DQM0	B03E (1x)
SDRAM_DQM1	B03D (1x)
SDRAM_DQM1	B03E (1x)
SDRAM_RAS	B03D (1x)
SDRAM_RAS	B03E (1x)
SDRAM_WE	B03D (1x)
SDRAM_WE	B03E (1x)
SIDE_AUDIO_IN_L	B04C (1x)
SIDE_AUDIO_IN_L	B06A (1x)
SIDE_AUDIO_IN_R	B04C (1x)
SIDE_AUDIO_IN_R	B06A (1x)
SIF	B03A (1x)
SIF	B04C (1x)
SIF1	B03A (2x)
SIF2	B03A (2x)
STANDBY	B02 (2x)
STANDBY	B04A (2x)
STANDBY	B06D (1x)
STANDBYn	B04A (1x)
STANDBYn	B04B (1x)
STANDBYn	B07 (1x)
STV_A25	B03C (1x)
STV_A25	B03D (1x)
STV_CS	B03C (1x)
STV_CS	B03D (1x)
STV_INT	B03C (1x)
STV_INT	B03D (1x)
STV_TDO	B03B (1x)
STV_TDO	B03C (1x)
TDA_CLK	B03B (1x)
TDA_CLK	B03C (1x)
TDA_DAT(0)	B03B (1x)
TDA_DAT(0)	B03C (1x)
TDA_DAT(0:7)	B03B (1x)
TDA_DAT(1)	B03B (1x)
TDA_DAT(1)	B03C (1x)
TDA_DAT(2)	B03B (1x)
TDA_DAT(2)	B03C (1x)
TDA_DAT(3)	B03B (1x)
TDA_DAT(3)	B03C (1x)
TDA_DAT(4)	B03B (1x)
TDA_DAT(4)	B03C (1x)
TDA_DAT(5)	B03B (1x)
TDA_DAT(5)	B03C (1x)
TDA_DAT(6)	B03B (1x)
TDA_DAT(6)	B03C (1x)
TDA_DAT(7)	B03B (1x)
TDA_DAT(7)	B03C (1x)
TDA_SYNC	B03B (1x)
TDA_SYNC	B03C (1x)
TDA_VALID	B03B (1x)
TDA_VALID	B03C (1x)
TS_CLK	B03C (1x)
TS_CLK	B03D (1x)
TS_DATA(0)	B03C (1x)
TS_DATA(0)	B03D (1x)
TS_DATA(0:7)	B03D (1x)
TS_DATA(1)	B03C (1x)
TS_DATA(1)	B03D (1x)
TS_DATA(2)	B03C (1x)
TS_DATA(2)	B03D (1x)
TS_DATA(3)	B03C (1x)
TS_DATA(3)	B03D (1x)
TS_DATA(4)	B03C (1x)
TS_DATA(4)	B03D (1x)
TS_DATA(5)	B03C (1x)
TS_DATA(5)	B03D (1x)
TS_DATA(6)	B03C (1x)
TS_DATA(6)	B03D (1x)
TS_DATA(7)	B03C (1x)
TS_DATA(7)	B03D (1x)
TS_SYNC	B03C (1x)
TS_SYNC	B03D (1x)
TS_VALID	B03C (1x)
TS_VALID	B03D (1x)
TXAn	B04B (2x)
TXAp	B04B (2x)
TXBn	B04B (2x)
TXBp	B04B (2x)
TXCLKn	B04B (2x)
TXCLKp	B04B (2x)
TXCn	B04B (2x)
TXCp	B04B (2x)
TXD0	B03D (1x)
TXD0	B03F (1x)
TXDn	B04B (2x)
TXDp	B04B (2x)
user_EEPROM_WP	B03D (1x)
user_EEPROM_WP	B03E (1x)
VCCEN	B03C (1x)
VDD	B07 (3x)
VDDA	B07 (2x)
VDISP	B04B (2x)
VGA_H	B04B (1x)
VGA_H	B06A (1x)
VGA_V	B04B (1x)
VGA_V	B06A (1x)
VIF1	B03A (2x)
VIF2	B03A (2x)
VIM_IBO	B03A (1x)
VIM_IBO	B03B (1x)
VIP_IBO	B03A (1x)
VIP_IBO	B03B (1x)
VSS	B07 (3x)
VSSA	B07 (5x)
WR	B04A (1x)
WR	B04B (1x)

G_16860_026.eps
250107

SSB: Diversity List

Item	Schematic	42PFP5332/10	42PFP5332/12
1001	B03F	x	x
1002	B03F	x	x
1101	B03A	x	x
1102	B03A	x	x
1103	B03A	x	x
1104	B03A	x	x
1201	B04B	x	x
1210	B04B	x	x
1211	B04B	x	x
1212	B04B	x	x
1213	B04B	x	x
1214	B04B	x	x
1215	B04B	x	x
1216	B04B	x	x
1301	B04A	x	x
1302	B04A	x	x
1303	B04A	x	x
1304	B04A	x	x
1305	B04A	-	-
1306	B04A	-	-
1307	B04A	-	-
1308	B04A	-	-
1309	B04A	-	-
1310	B04A	-	-
1311	B04A	-	-
1312	B04A	-	-
1314	B04A	x	x
1411	B04C	x	x
1500	B06B	-	-
1501	B06B	-	-
1502	B06B	-	-
1503	B06B	-	-
1504	B06B	x	x
1505	B06B	-	-
1506	B06B	x	x
1507	B06B	-	-
1508	B06B	-	-
1509	B06B	-	-
1510	B06B	-	-
1511	B06B	-	-
1512	B06B	-	-
1513	B06B	-	-
1514	B06B	-	-
1515	B06B	-	-
1516	B06B	-	-
1517	B06B	-	-
1518	B06B	-	-
1519	B06B	-	-
1520	B06B	-	-
1521	B06B	-	-
1522	B06B	-	-
1523	B06B	-	-
1524	B06B	-	-
1525	B06B	-	-
1526	B06B	-	-
1601	B06A	-	-
1603	B06A	-	-
1606	B06A	-	-
1607	B06A	-	-
1608	B06A	-	-
1609	B06A	-	-
1610	B06A	-	-
1611	B06A	-	-
1612	B06A	-	-
1613	B06A	-	-
1614	B06A	-	-
1615	B06A	x	x
1618	B06A	-	-
1619	B06A	-	-
1735	B07	x	x
1810	B06C	x	x
1811	B06C	x	x
1823	B06C	x	x
1900	B06D	-	-
1901	B06D	-	-
1939	B04B	-	-
1940	B04B	-	-
1977	B04A	-	-
1980	B04A	-	-
1B11	B02	-	-
1C01	B02	x	x
1G01	B03D	-	-
1G03	B03D	-	-
1G04	B03D	-	-
1G50	B04B	-	-
1G51	B04B	x	x
1J14	B03F	-	-
1K00	B03C	-	-
1M20	B04A	x	x
1P11	B02	x	x
2110	B03A	-	-
2111	B03A	-	-
2112	B03A	x	x
2113	B03A	-	-
2114	B03A	-	-
2115	B03A	-	-
2116	B03A	-	-
2117	B03A	x	x
2118	B03A	x	x
2119	B03A	x	x
2120	B03A	x	x
2121	B03A	x	x
2122	B03A	x	x
2123	B03A	x	x
2124	B03A	-	-
2125	B03A	x	x
2126	B03A	x	x
2127	B03A	x	x
2128	B03A	x	x
2129	B03A	x	x
2130	B03A	x	x
2131	B03A	x	x
2132	B03A	x	x
2133	B03A	x	x
2134	B03A	-	-
2135	B03A	-	-
2136	B03A	x	x
2137	B03A	x	x
2138	B03A	x	x
2139	B03A	x	x
2140	B03A	-	-
2141	B03A	-	-
2142	B03A	-	-
2143	B03A	x	x
2144	B03A	x	x
2145	B03A	x	x
2146	B03A	-	-
2147	B03A	x	x
2148	B03A	x	x
2149	B03A	x	x
2151	B03A	x	x
2161	B06C	-	-
2191	B06D	-	-
2205	B04B	-	-
2206	B04B	-	-
2207	B04B	-	-
2208	B04B	-	-
2209	B04B	-	-
2210	B04B	-	-
2211	B04B	x	x
2212	B04B	x	x
2213	B04B	x	x
2214	B04B	x	x
2215	B04B	x	x
2216	B04B	x	x
2217	B04B	x	x
2218	B04B	x	x
2219	B04B	x	x
2220	B04B	x	x
2221	B04B	x	x
2222	B04B	x	x
2223	B04B	x	x
2224	B04B	x	x
2225	B04B	x	x
2226	B04B	x	x
2227	B04B	x	x
2228	B04B	x	x
2229	B04B	x	x
2230	B04B	x	x
2231	B04B	x	x
2232	B04B	x	x
2233	B04B	x	x
2234	B04B	x	x
2235	B04B	x	x
2236	B04B	x	x
2237	B04B	x	x
2238	B04B	x	x
2239	B04B	x	x
2240	B04B	x	x
2241	B04B	x	x
2242	B04B	x	x
2243	B04B	x	x
2244	B04B	x	x
2245	B04B	x	x
2246	B04B	x	x
2247	B04B	x	x
2248	B04B	-	-
2250	B04B	x	x
2251	B04B	x	x
2252	B04B	x	x
2253	B04B	x	x
2254	B04B	x	x
2255	B04B	x	x
2256	B04B	x	x
2257	B04B	x	x
2258	B04B	x	x
2259	B04B	x	x
2260	B04B	x	x
2261	B04B	x	x
2262	B04B	-	-
2263	B04B	-	-
2264	B04B	-	-
2265	B04B	-	-
2266	B04B	x	x
2267	B04B	x	x
2268	B04B	x	x
2269	B04B	x	x
2270	B04B	x	x
2271	B04B	x	x
2272	B04B	x	x
2273	B04B	x	x
2274	B04B	x	x
2275	B04B	x	x
2276	B04B	x	x
2277	B04B	x	x
2278	B04B	-	-
2279	B04B	x	x
2280	B04B	x	x
2281	B04B	-	-
2282	B04B	x	x
2283	B04B	-	-
2284	B04B	x	x
2285	B04B	-	-
2286	B04B	x	x
2287	B04B	x	x
2288	B04B	x	x
2289	B04B	x	x
2290	B04B	x	x
2291	B04B	x	x
2292	B04B	x	x
2293	B04B	x	x
2294	B04B	-	-
2295	B04B	x	x
2296	B04B	x	x
2297	B04B	x	x
2298	B04B	x	x
2310	B04A	x	x
2311	B04A	x	x
2312	B04A	x	x
2313	B04A	x	x
2314	B04A	x	x
2315	B04A	x	x
2316	B04A	x	x
2317	B04A	x	x
2318	B04A	x	x
2319	B04A	-	-
2320	B04A	x	x
2321	B04A	-	-
2322	B04A	-	-
2323	B04A	x	x
2324	B04A	-	-
2325	B04A	-	-
2326	B04A	-	-
2327	B04A	x	x
2328	B04A	-	-
2329	B04A	x	x
2330	B04A	x	x
2331	B04A	x	x
2332	B04A	x	x
2333	B04A	x	x
2334	B04A	-	-
2335	B04A	x	x
2336	B04A	x	x
2337	B04A	x	x
2338	B04A	x	x
2339	B04A	-	-
2340	B04A	-	-
2408	B04C	x	x
2409	B04C	x	x
2410	B04C	x	x
2411	B04C	x	x
2412	B04C	x	x
2413	B04C	x	x
2414	B04C	x	x
2415	B04C	x	x
2416	B04C	x	x
2417	B04C	x	x
2418	B04C	x	x
2419	B04C	x	x
2420	B04C	x	x
2421	B04C	x	x
2422	B04C	x	x
2423	B04C	x	x
2424	B04C	x	x
2425	B04C	x	x
2426	B04C	x	x
2427	B04C	x	x
2428	B04C	x	x
2429	B04C	x	x
2430	B04C	x	x
2431	B04C	x	x
2432	B04C	x	x
2433	B04C	x	x
2434	B04C	x	x
2435	B04C	x	x
2436	B04C	x	x
2437	B04C	x	x
2438	B04C	x	x
2439	B04C	x	x
2440	B04C	x	x
2441	B04C	x	x
2442	B04C	x	x
2443	B04C	x	x
2444	B04C	x	x
2445	B04C	x	x
2446	B04C	-	-
2447	B04C	-	-
2502	B06B	x	x
2506	B06B	x	x
2508	B06B	x	x
2509	B06B	x	x
2512	B06B	x	x
2514	B06B	x	x
2515	B06B	x	x
2517	B06B	x	x
2518	B06B	x	x
2520	B06B	x	x
2521	B06B	x	x
2523	B06B	x	x
2524	B06B	-	-
2525	B06B	x	x
2526	B06B	-	-
2527	B06B	-	-
2528	B06B	-	-
2529	B06B	-	-
2530	B06B	-	-
2531	B06B	-	-
2533	B06B	x	x
2534	B06B	x	x
2535	B06B	-	-
2536	B06B	x	x
2538	B06B	-	-
2600	B06A	-	-
2601	B06A	-	-
2602	B06A	-	-
2603	B06A	-	-
2606	B06A	-	-
2607	B06A	x	x
2608	B06A	x	x
2609	B06A	-	-
2610	B06A	x	x
2612	B06A	x	x
2613	B06A	-	-
2614	B06A	-	-
2615	B06A	-	-
2616	B06A	-	-
2617	B06A	-	-
2801	B06C	x	x
2802	B06C	x	x
2803	B06C	x	x
2804	B06C	x	x
2805	B06C	x	x
2806	B06C	x	x
2807	B06C	x	x
2808	B06C	x	x
2809	B06C	x	x
2810	B06C	x	x
2811	B06C	x	x
2812	B06C	x	x
2813	B06C	x	x
2814	B06C	x	x
2815	B06C	x	x
2816	B06C	x	x
2817	B06C	x	x
2818	B06C	x	x
2819	B06C	x	x
2828	B06C	x	x
2829	B06C	x	x
2830	B06C	x	x
2833	B06C	x	x
2835	B06C	x	x
2836	B06C	x	x
2838	B06C	x	x
2839	B06C	x	x
2840	B06C	x	x
2843	B06C	x	x
2844	B06C	x	x
2845	B06C	x	x
2847	B06C	x	x
2848	B06C	x	x
2849	B06C	x	x
2850	B06C	x	x
2851	B06C	x	x
2852	B06C	x	x
2853	B06C	x	x
2854	B06C	x	x
2855	B06C	x	x
2856	B06C	x	x
2857	B06C	x	x
2858	B06C	x	x
2859	B06C	x	x
2860	B06C	x	x
2861	B06C	x	x
2865	B06C	x	x
2866	B06C	x	x
2867	B06C	x	x
2868	B06C	x	x
2869	B06C	x	x
2870	B06C	x	x
2871	B06C	x	x
2872	B06C	x	x
2873	B06C	x	x
2874	B06C	x	x
2875	B06C	x	x
2876	B06C	x	x
2901	B06D	x	x
2902	B06D	x	x
2903	B06D	x	x
2904	B06D	x	x
2905	B06D	x	x
2906	B06D	x	x
2907	B06D	x	x
2908	B06D	x	x
2909	B06D	-	-
2910	B06D	-	-
2911	B06D	-	-
2912	B06D	-	-
2913	B06D	x	x
2940	B06D	x	x
2A01	B07	x	x
2A02	B07	x	x
2A04	B07	x	x
2A08	B07	x	x
2A09	B07	x	x
2A10	B07	x	x
2A11	B07	x	x
2A12	B07	x	x
2A13	B07	x	x
2A14	B07	x	x
2A15	B07	x	x
2A16	B07	x	x
2A17	B07	x	x
2A18	B07	x	x
2A19	B07	x	x
2A20	B07	x	x
2A21	B07	x	x
2A22	B07	x	x
2A23	B07	x	x
2A24	B07	x	x
2A25	B07	x	x
2A26	B07	x	x
2A27	B07	x	x
2A28	B07	x	x
2A29	B07	x	x
2A30	B07	x	x
2A31	B07	x	x
2A32	B07	x	x
2A33	B07	x	x
2A34	B07	x	x
2A35	B07	x	x
2A36	B07	x	x
2A37	B07	x	x
2A38	B07	x	x
2A40	B07	x	x
2A41	B07	x	x
2A45	B07	x	x
2A46	B07	x	x
2A47	B07	x	x
2B10	B02	x	x
2B11	B02	x	x
2B12	B02	x	x
2B13	B02	x	x
2B14	B02	x	x
2B15	B02	x	x
2B16	B02	-	-
2B17	B02	x	x
2B18	B02	x	x
2B19	B02	x	x
2B20	B02	x	x
2B21	B02	x	x
2B22	B02	-	-
2B23	B02	-	-
2B24	B02	x	x
2B25	B02	x	x
2B26	B02	-	-
2C55	B02	x	x
2C56	B02	x	x
2C57	B02	x	x
2C58	B02	-	-
2C59	B02	-	-
2C60	B02	-	-
2C61	B02	-	-
2F10	B03B	-	-
2F11	B03B	-	-
2F12	B03B	-	-
2F13	B03B	-	-
2F14	B03B	-	-
2F15	B03B	-	-
2F16	B03B	-	-
2F17	B03B	-	-
2F18	B03B	-	-
2F19	B03B	-	-
2F20	B03B	-	-
2F21	B03B	-	-
2F22	B03B	-	-
2F23	B03B	-	-
2F24	B03B	-	-
2F25	B03B	-	-
2F26	B03B	-	-
2F27	B03B	-	-
2F28	B03B	-	-
2F29	B03B	-	-
2F30	B03B	-	-
2F31	B03B	-	-
2F32	B03B	-	-
2F33	B03B	-	-
2G02	B03D	-	-
2G03	B03D	-	-
2G04	B03D	-	-
2G05	B03D	-	-
2G06	B03D	-	-
2G07	B03D	-	-
2G08	B03D	-	-
2G09	B03D	-	-
2G10	B03D	-	-
2G11	B03D	-	-
2G12	B03D	-	-
2G13	B03D	-	-
2G14	B03D	-	-
2G15	B03D	-	-
2G16	B03D	-	-
2G17	B03D	-	-
2G18	B03D	-	-
2G19	B03D	-	-
2G20	B03D	-	-
2G21	B03D	-	-
2G22	B03D	-	-
2G23	B03D	-	-
2G24	B03D	-	-
2G31	B03D	-	-
2G32	B03D	-	-
2G33	B03D	-	-
2G34	B03D	-	-
2H03	B03E	-	-
2H04	B03E	-	-
2H06	B03E	-	-
2H07	B03E	-	-
2H08	B03E	-	-
2H09	B03E	-	-
2H10	B03E	-	-
2H11	B03E	-	-
2H12	B03E	-	-
2H13	B03E	-	-
2H14	B03E	-	-
2H15	B03E	-	-
2J01	B03F	-	-
2J02	B03F	-	-
2J04	B03F	-	-
2J05	B03F	-	-
2J06	B03F	-	-
2J14	B03F	-	-
2J15	B03F	-	-
2J60	B03F	-	-
2J62	B03F	-	-
2J63	B03F	-	-
2J64	B03F	-	-
2J66	B03F	-	-
2J67	B03F	-	-
2J68	B03F	-	-
2J69	B03F	-	-
2J70	B03F	-	-
2J71	B03F	-	-
2J72	B03F	-	-
2J73	B03F	-	-
2K00	B03C	-	-
2K01	B03C	-	-
2K02	B03C	-	-
2K03	B03C	-	-
2K04	B03C	-	-
2K05	B03C	-	-
2K06	B03C	-	-
2K07	B03C	-	-
2K08	B03C	-	-
2K09	B03C	-	-
2K10	B03C	-	-
2K11	B03C	-	-
2K12	B03C	-	-
2K13	B03C	-	-
2K14	B03C	-	-
2K15	B03C	-	-
2K16	B03C	-	-
2K17	B03C	-	-
2L20	B04A	-	-
2L21	B04A	-	-
2L22	B04A	-	-
2L23	B04A	-	-
2L24	B04A	x	x
2L25	B04A	x	x
2L26	B04A	-	-
2L27	B04A	-	-
2L28	B04A	-	-
2L29	B04A	-	-
2L30	B04A	-	-
2L31	B04A	-	-
2L32	B04A	-	-
2L33	B04A	-	-
3110	B03A	x	x
3111	B03A	x	x
3113	B03A	-	-
3115	B03A	x	x
3116	B03A	x	x
3117	B03A	x	x
3118	B03A	x	x
3119	B03A	x	x
3120	B03A	x	x
3121	B03A	x	x
3122	B03A	x	x
3123	B03A	x	x
3124	B03A	x	x
3125	B03A	x	x
3126	B03A	x	x
3127	B03A	x	x
3128	B03A	x	x
3129	B03A	x	x
3130	B03A	x	x
3131	B03A	-	-
3132	B03A	-	-
3133	B03A	x	x
3134	B03A	x	x
3135	B03A	x	x
3136	B03A	x	x
3137	B03A	x	x
3210	B04B	-	-
3211	B04B	x	x
3212	B04B	x	x
3213	B04B	-	-
3215	B04B	x	x
3216	B04B	-	-
3217	B04B	-	-
3219	B04B	-	-
3220	B04B	-	-
3221	B04B	x	x
3222	B04B	x	x
3223	B04B	-	-
3224	B04B	-	-
3225	B04B	-	-
3226	B04B	-	-
3227	B04B	x	x
3228	B04B	-	-
3229	B04B	-	-
3230	B04B	-	-
3231	B04B	-	-
3232	B04B	-	-
3233	B04B	x	x
3235	B04B	x	x
3238	B04B	x	x
3239	B04B	x	x
3240	B04B	-	-
3241	B04B	-	-
3242	B04B	-	-
3243	B04B	-	-
3244	B04B	x	x
3245	B04B	-	-
3246	B04B	-	-
3247	B04B	-	-
3248	B04B	x	x
3250	B04B	-	-
3251	B04B	-	-
3253	B04B	-	-
3254	B04B	-	-
3255	B04B	-	-
3256	B04B	-	-
3257	B04B	-	-
3258	B04B	-	-
3266	B04B	x	x
3267	B04B	x	x
3272	B04B	-	-
3273	B04B	-	-
3274	B04B	-	-
3275	B04B	-	-
3276	B04B	-	-
3300	B04A	x	x
3303	B04A	x	x
3304	B04A	x	x
3305	B04A	x	x
3306	B04A	x	x
3307	B04A	-	-
3308	B04A	x	x
3309	B04A	x	x
3310	B04A	x	x
3311	B04A	x	x
3312	B04A	x	x
3313	B04A	x	x
3314	B04A	x	x
3315	B04A	x	x
3316	B04A	x	x
3317	B04A	-	-
3318	B04A	x	x
3319	B04A	x	x
3320	B04A	x	x
3321	B04A	-	-
3322	B04A	x	x
3323	B04A	x	x
3324	B04A	x	x
3325	B04A	x	x
3326	B04A	-	-
3327	B04A	-	-
3328	B04A	-	-
3329	B04A	x	x
3330	B04A	-	-
3331	B04A	-	-
3332	B04A	-	-
3333	B04A	-	-
3334	B04A	-	-
3335	B04A	-	-
3336	B04A	x	x
3337	B04A	-	-
3338	B04A	x	x
3339	B04A	x	x
3340	B04A	x	x
3341	B04A	x	x
3342	B04A	x	x
3343	B04A	x	x
3344	B04A	-	-
3345	B04A	x	x
3346	B04A	x	x
3347	B04A	x	x
3348	B04A	x	x
3349	B04A	x	x
3350	B04A	x	x
3351	B04A	x	x
3352	B04A	x	x
3353	B04A	x	x
3354	B04A	x	x
3355	B04A	x	x
3356	B04A	x	x
3357	B04A	x	x
3358	B04A	-	-
3359	B04A	-	-
3360	B04A	-	-
3361	B04A	x	x
3362	B04A	-	-
3363	B04A	-	-
3364	B04A	x	x
3365	B04A	x	x
3366	B04A	x	x
3367	B04A	-	-
3368	B04A	x	x
3369	B04A	-	-
3370	B04A	x	x
3371	B04A	-	-
3372	B04A	x	x
3373	B04A	x	x
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3375	B04A	x	x
3376	B04A	-	-
3377	B04A	x	x
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3381	B04A	x	x
3382	B04A	x	x
3383	B04A	x	x
3384	B04A	x	x
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3390	B04A	x	x
3391	B04A	x	x
3392	B04A	-	-
3393	B04A	x	x
3394	B04A	x	x
3395	B04A	x	x
3396	B04A	x	x
3397	B04A	x	x
3398	B04A	x	x
3399	B04A	x	x
3402	B04C	x	x
3410	B04C	x	x
3411	B04C	x	x
3416	B04C	-	-
3417	B04C	x	x
3418	B04C	x	x
3419	B04C	x	x
3420	B04C	x	x
3500	B06B	x	x
3502	B06B	x	x
3503	B06B	x	x
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3508	B06B	x	x
3510	B06B	x	x
3511	B06B	x	x
3512	B06B	x	x
3513	B06B	x	x
3514	B06B	x	x
3515	B06B	x	x
3516	B06B	x	x
3517	B06B	x	x
3518	B06B	x	x
3519	B06B	x	x
3520	B06B	x	x
3521	B06B	x	x
3522	B06B	x	x
3523	B06B	x	x
3524	B06B	x	x
3525	B06B	x	x
3526	B06B	x	x
3528	B06B	x	x
3529	B06B	x	x
3530	B06B	x	x
3531	B06B	x	x
3532	B06B	x	x
3533	B06B	x	x
3535	B06B	x	x
3536	B06B	x	x
3537	B06B	x	x
3538	B06B	x	x
3540	B06B	x	x
3545	B06B	x	x
3546	B06B	x	x
3550	B06B	x	x
3551	B06B	x	x
3552	B06B	x	x
3553	B06B	x	x
3554	B06B	x	x
3555	B06B	x	x
3600	B06A	-	-
3601	B06A	x	x
3602	B06A	-	-
3603	B06A	x	x
3604	B06A	-	-
3605	B06A	x	x
3607	B06A	x	x
3608	B06A	x	x
3609	B06A	-	-
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3612	B06A	x	x
3613	B06A	-	-
3615	B06A	-	-
3616	B06A	-	-
3617	B06A	x	x
3618	B06A	x	x
3619	B06A	x	x
3620	B06A	-	-
3621	B06A	-	-
3622	B06A	-	-
3623	B06A	-	-
3624	B06A	-	-
3625	B06A	-	-
3801	B06C	x	x
3802	B06C	x	x
3803	B06C	x	x
3804	B06C	x	x
3805	B06C	x	x
3806	B06C	x	x
3809	B06C	x	x
3810	B06C	x	x
3811	B06C	x	x
3815	B06C	x	x
3819	B06C	x	x
3828	B06C	x	x
3830	B06C	x	x
3831	B06C	x	x
3832	B06C	x	x
3833	B06C	x	x
3834	B06C	x	x
3835	B06C	x	x
3846	B06C	x	x
3850	B06C	x	x
3857	B06C	x	x
3858	B06C	x	x
3859	B06C	x	x
3860	B06C	x	x
3862	B06C	x	x
3863	B06C	x	x
3864	B06C	x	x
3877	B06C	x	x
3880	B06C	x	x
3881	B06C	x	x
3882	B06C	x	x
3883	B06C	x	x
3884	B06C	-	-
3885	B06C	-	-
3886	B06C	-	-
3896	B06C	x	x
3897	B06C	x	x
3901	B06D	x	x
3902	B06D	x	x
3903	B06D	-	-
3904	B06D	x	x
3905	B06D	x	x
3906	B06D	x	x
3907	B06D	x	x
3908	B06D	x	x
3909	B06D	-	-
3910	B06D	x	x
3911	B06D	x	x
3912	B06D	x	x
3913	B06D	x	x
3914	B06D	x	x
3915	B06D	x	x
3916	B06D	x	x
3917	B06D	x	x
3918	B06D	x	x
3934	B06D	x	x
3935	B06D	x	x
3937	B06D	x	x
3938	B06D	x	x
3940	B06D	-	-
3942	B06D	x	x
3943	B06D	x	x
3A01	B07	x	x
3A02	B07	x	x
3A03	B07	x	x
3A04	B07	x	x
3A05	B07	x	x
3A06	B07	x	x
3A07	B07	x	x
3A08	B07	x	x
3A09	B07	x	x
3A11	B07	x	x
3A12	B07	x	x
3A13	B07	x	x
3A14	B07	x	x
3A15	B07	x	x
3A17	B07	x	x
3A19	B07	x	x
3A26	B07	x	x
3A27	B07	x	x
3A28	B07	x	x
3A29	B07	x	x
3A30	B07	x	x
3A31	B07	x	x
3B10	B02	-	-
3B11	B02	x	x
3B12	B02	x	x
3B13	B02	x	x
3B14	B02	x	x
3B15	B02	x	x
3B17	B02	-	-
3B18	B02	-	-
3B19	B02	x	x
3F10	B03B	-	-
3F11	B03B	-	-
3F12	B03B	-	-
3F13	B03B	-	-
3F14	B03B	-	-
3F15	B03B	-	-
3F16	B03B	-	-
3F17	B03B	-	-
3F18	B03B	-	-
3F19	B03B	-	-
3F20	B03B	-	-
3F21	B03B	-	-
3F22	B03B	-	-
3F23	B03B	-	-
3F24	B03B	-	-
3F25	B03B	-	-
3F26	B03B	-	-
3F27	B03B	-	-
3F28	B03B	-	-
3F29	B03B	-	-
3F30	B03B	-	-
3F31	B03B	-	-
3F32	B03B	-	-
3F33	B03B	-	-
3F34	B03B	-	-
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3F41	B03B	-	-
3F42	B03B	-	-
3F44	B03B	-	-
3F46	B03B	-	-
3F48	B03B	-	-
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3G12	B03D	-	-
3G15	B03D	-	-
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3G19	B03D	-	-
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3G29	B03D	-	-
3G30	B03D	-	-
3G31	B03D	-	-
3G33	B03D	-	-
3G34	B03D	-	-
3G35	B03D	-	-
3G36	B03D	-	-
3G37	B03D	-	-
3G38	B03D	-	-
3G40	B03D	-	-
3G41	B03D	-	-
3G43	B03D	-	-
3G44	B03D	-	-
3G46	B03D	-	-
3G47	B03D	-	-
3G48	B03D	-	-
3G51	B03D	-	-
3G54	B03D	-	-
3G55	B03D	-	-
3G56	B03D	-	-
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3G58	B03D	-	-
3G59	B03D	-	-
3G60	B03D	-	-
3G61	B03D	-	-
3G62	B03D	-	-
3G63	B03D	-	-
3G65	B03D	-	-
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3H05	B03E	-	-
3H09	B03E	-	-
3H10	B03E	-	-
3H11	B03E	-	-
3H12	B03E	-	-
3H13	B03E	-	-
3H14	B03E	-	-
3J01	B03F	-	-
3J02	B03F	-	-
3J03	B03F	-	-
3J14	B03F	-	-
3J15	B03F	-	-
3J59	B03F	-	-
3J60	B03F	-	-
3J61	B03F	-	-
3J62	B03F	-	-
3J63	B03F	-	-
3J64	B03F	-	-
3J65	B03F	-	-
3J66	B03F	-	-
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3K02	B03C	-	-
3K03	B03C	-	-
3K04	B03C	-	-
3K05	B03C	-	-
3K06	B03C	-	-
3K07	B03C	-	-
3K08	B03C	-	-
3K09	B03C	-	-
3K10	B03C	-	-
3K11	B03C	-	-
3K12	B03C	-	-
3K13	B03C	-	-
3K15	B03C	-	-
3K16	B03C	-	-
3K17	B03C	-	-
3K18	B03C	-	-
3K19	B03C	-	-
3K20	B03C	-	-
3K21	B03C	-	-
3K22	B03C	-	-
3K23	B03C	-	-
3K24	B03C	-	-
3K25	B03C	-	-
3K26	B03C	-	-
3K27	B03C	-	-
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3K29	B03C	-	-
3K30	B03C	-	-
3K31	B03C	-	-
3K32	B03C	-	-
3K33	B03C	-	-
3K34	B03C	-	-
3K38	B03C	-	-
3K39	B03C	-	-
3K40	B03C	-	-
3K41	B03C	-	-
3K42	B03C	-	-
3K43	B03C	-	-
3K44	B03C	-	-
3K45	B03C	-	-
3K46	B03C	-	-
3K47	B03C	-	-
3K48	B03C	-	-
3K49	B03C	-	-
3K50	B03C	-	-
3K51	B03C	-	-
3K52	B03C	-	-
3L01	B04A	x	x
3L02	B04A	x	x
3L04	B04A	x	x
3L05	B04A	x	x
3L06	B04A	-	-
3L07	B04A	-	-
3L08	B04A	-	-
3L09	B04A	-	-
3L10	B04A	x	x
3L11	B04A	x	x
3L12	B04A	-	-
3L13	B04A	-	-
3L14	B04A	-	-
3L15	B04A	x	x
3L20	B04A	-	-
3L21	B04A	-	-
3L22	B04A	x	x
3L23	B04A	x	x
3L24	B04A	-	-
3L25	B04A	-	-
3L26	B04A	-	-
4110	B03A	x	x
4111	B03A	x	x
4112	B03A	x	x
4113	B03A	x	x
4114	B03A	x	x
4115	B03A	-	-
4116	B03A	-	-
4117	B03A	-	-
4118	B03A	-	-
4119	B03A	-	-
4120	B03A	x	x
4121	B03A	x	x
4122	B03A	x	x
4123	B03A	x	x
4124	B03A	x	x
4125	B03A	-	-
4203	B04B	-	-
4204	B04B	-	-
4205	B04B	-	-
4206	B04B	-	-
4207	B04B	-	-
4208	B04B	-	-
4209	B04B	-	-
4210	B04B	-	-
4211	B04B	-	-
4212	B04B	-	-
4213	B04B	-	-
4214	B04B	-	-
4215	B04B	-	-
4301	B04A	-	-
4302	B04A	-	-
4303	B04A	-	-
4306	B04A	-	-
4307	B04A	-	-
4308	B04A	x	x
4309	B04A	x	x
4310	B04A	x	x
4313	B04A	-	-
4314	B04A	-	-
4315	B04A	-	-
4316	B04A	x	x
4323	B04A	-	-
4324	B04A	-	-
4325	B04A	-	-
4401	B04C	x	x
4402	B04C	x	x
4403	B04C	x	x
4406	B04C	x	x
4407	B04C	x	x
4408	B04C	x	x
4409	B04C	-	-
4410	B04C	-	-
4411	B04C	x	x
4412	B04C	-	-
4502	B06B	-	-
4504	B06B	-	-
4601	B06A	-	-
4602	B06A	-	-
4603	B06A	-	-
4604	B06A	-	-
4751	B04B	-	-
4752	B04B	-	-
4755	B04B	-	-
4756	B04B	-	-
4759	B04B	-	-
4760	B04B	-	-
4762	B04B	-	-
4763	B04B	-	-
4802	B06C	-	-
4803	B06C	x	x
4804	B06C	-	-
4805	B06C	-	-
4901	B06D	x	x
4902	B06D	x	x
4903	B06D	x	x
4967	B04B	-	-
4968	B04B	-	-
4970	B04B	-	-
4971	B04B	-	-
4974	B04B	-	-
4975	B04B	-	-
4978	B04B	-	-
4979	B04B	-	-
4981	B04B	-	-
4982	B04B	-	-
4985	B04B	-	-
4986	B04B	-	-
4996	B04B	-	-
4997	B04B	-	-
4A01	B07	-	-
4A02	B07	-	-
4B01	B02	-	-
4C01	B02	-	-
4C55	B02	-	-
4C56	B02	-	-
4C57	B02	x	x
4C58	B02	x	x
4C59	B02	x	x
4C60	B02	x	x
4C61	B02	-	-
4C62	B02	-	-
4F11	B03B	-	-
4F12	B03B	-	-
4G01	B03D	-	-
4G02	B03D	-	-
4G03	B03D	-	-
4G04	B03D	-	-
4G05	B03D	-	-
4G09	B03D	-	-
4G10	B03D	-	-
4G31	B03D	-	-
4H00	B03E	-	-
4H01	B03E	-	-
4H02	B03E	-	-
4H03	B03E	-	-
4H04	B03E	-	-
4H05	B03E	-	-
4H12	B03E	-	-
4H15	B03E	-	-
4J14	B03F	-	-
4J15	B03F	-	-
4L20	B04A	x	x
4L21	B04A	x	x
4L24	B04A	x	x
4L25	B04A	x	x
5007	B04B	-	-
5008	B04B	-	-
5110	B03A	-	-
5111	B03A	x	x
5112	B03A	x	x
5113	B03A	-	-
5114	B03A	x	x
5115	B03A	x	x
5116	B03A	-	-
5117	B03A	-	-
5118	B03A	x	x
5120	B03A	-	-
5121	B03A	-	-
5210	B04B	x	x
5211	B04B	-	-
5212	B04B	x	x
5213	B04B	x	x
5214	B04B	x	x
5215	B04B	x	x
5216	B04B	x	x
5217	B04B	-	-
5218	B04B	x	x
5219	B04B	x	x
5220	B04B	x	x
5221	B04B	x	x
5222	B04B	x	x
5223	B04B	x	x
5224	B04B	x	x
5225	B04B	x	x
5226	B04B	x	x
5227	B04B	x	x
5228	B04B	x	x
5301	B04A	x	x
5302	B04A	x	x
5304	B04A	x	x
5401	B04C	x	x
5402	B04C	x	x
5403	B04C	x	x
5810	B06C	x	x
5811	B06C	x	x
5812	B06C	x	x
5813	B06C	x	x
5814	B06C	x	x
5815	B06C	x	x
5816	B06C	x	x
5817	B06C	x	x
5818	B06C	x	x
5A03	B07	x	x
5A04	B07	x	x
5A05	B07	x	x
5A06	B07	x	x
5A07	B07	x	x
5B01	B02	x	x
5B02	B02	x	x
5B03	B02	x	x
5B04	B02	-	-
5B05	B02	-	-
5B06	B02	x	x
5B10	B02	x	x
5B11	B02	x	x
5F10	B03B	-	-
5F11	B03B	-	-
5G01	B03D	-	-
5G02	B03D	-	-
5G03	B03D	-	-
5G04	B03D	-	-
5H01	B03E	-	-
5H02	B03E	-	-
5H03	B03E	-	-
5J01	B03F	-	-
5J52	B03F	-	-
5J53	B03F	-	-
5J54	B03F	-	-
5J55	B03F	-	-
5K01	B03C	-	-
5K02	B03C	-	-
5K03	B03C	-	-
5K04	B03C	-	-
5K05	B03C	-	-
6103	B03A	x	x
6110	B03A	x	x
6201	B04B	-	-
6202	B04B	-	-
6301	B04A	x	x
6302	B04A	x	x
6303	B04A	x	x
6304	B04A	x	x
6305	B04A	x	x
6306	B04A	x	x
6307	B04A	x	x
6308	B04A	-	-
6309	B04A	-	-
6310	B04A	-	-
6311	B04A	-	-
6312	B04A	-	-
6313	B04A	-	-
6317	B04A	-	-
6318	B04A	x	x
6501	B06B	-	-
6504	B06B	-	-
6505	B06B	-	-
6507	B06B	-	-
6509	B06B	-	-
6510	B06B	-	-
6511	B06B	x	x
6512	B06B	x	x
6513	B06B	x	x
6514	B06B	-	-
6515	B06B	-	-
6516	B06B	-	-
6517	B06B	x	x
6518	B06B	-	-
6519	B06B	-	-
6520	B06B	-	-
6521	B06B	-	-
6522	B06B	-	-
6523	B06B	-	-
6524	B06B	-	-
6525	B06B	-	-
6604	B06A	-	-
6605	B06A	-	-
6606	B06A	-	-
6607	B06A	-	-
6610	B06A	-	-
6611	B06A	-	-
6612	B06A	-	-
6613	B06A	-	-
6614	B06A	-	-
6615	B06A	-	-
6801	B06C	x	x
6802	B06C	x	x
6830	B06C	x	x
6831	B06C	x	x
6914	B06D	x	x
6916	B06D	x	x
6919	B06D	x	x
6965	B06C	-	-
6966	B06C	-	-
6B01	B02	x	x
6B02	B02	x	x
6B03	B02	x	x
6J03	B03F	-	-
6J14	B03F	-	-
6J15	B03F	-	-
6J60	B03F	-	-
6J61	B03F	-	-
6J62	B03F	-	-
6J63	B03F	-	-
7109	B03A	x	x
7111	B03A	-	-
7113	B03A	x	x
7114	B03A	x	x
7125	B06C	-	-
7126	B06C	-	-
7129	B06C	-	-
7130	B06C	-	-
7131	B03A	-	-
7132	B03A	-	-
7133	B06C	x	x
7134	B06C	-	-
7136	B06C	-	-
7137	B06C	-	-
7140	B06C	-	-
7141	B06C	-	-
7144	B06C	-	-
7145	B06C	-	-
7202	B04B	x	x
7203	B04B	-	-
7204	B04B	x	x
7205	B04B	x	x
7206	B04B	-	-
7207	B04B	-	-
7208	B04B	-	-
7210	B04B	-	-
7214	B04B	-	-
7308	B04A	x	x
7310	B04A	x	x
7311	B04A	x	x
7312	B04A	x	x
7314	B04A	-	-
7315	B04A	x	x
7316	B04A	x	x
7317	B04A	x	x
7320	B04A	x	x
7321	B04A	x	x
7322	B04A	x	x
7410	B04C	x	x
7411	B04C	x	x
7500	B06B	x	x
7502	B06B	x	x
7503	B06B	x	x
7504	B06B	x	x
7601	B06A	-	-
7810	B06C	x	x
7811	B06C	x	x
7812	B06C	x	x
7813	B06C	x	x
7814	B06C	x	x
7816	B06C	x	x
7824	B06C	x	x
7825	B06C	x	x
7850	B06C	x	x
7851	B06C	x	x
7852	B06C	x	x
7860	B06C	x	x
7861	B06C	x	x
7902	B06D	x	x
7911	B06D	x	x
7912	B06D	x	x
7913	B06D	x	x
7914	B06D	x	x
7915	B06D	x	x
7916	B06D	x	x
7917	B06D	x	x
7919	B06D	x	x
7922	B06D	x	x
7A01	B07	x	x
7A05	B07	x	x
7A06	B07	x	x
7A07	B07	x	x
7B01	B02	x	x
7B02	B02	x	x
7B03	B02	x	x
7B04	B02	x	x
7B05	B02	-	-
7B06	B02	-	-
7B08	B02	-	-
7F01	B03B	-	-
7F02	B03B	-	-
7F03	B03B	-	-
7F04	B03B	-	-
7G00	B03D	-	-
7G06	B03D	-	-
7H00	B03E	-	-
7H02	B03E	-	-
7H03	B03E	-	-
7J04	B03F	-	-
7J05	B03F	-	-
7K00	B03C	-	-
7K01	B03C	-	-
7K02	B03C	-	-
7K03	B03C	-	-
7K04	B03C	-	-
7K05	B03C	-	-
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A116	B03A	-	-
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A125	B03A	-	-
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F122	B03A	-	-
F123	B03A	-	-
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F134	B03A	-	-
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F387	B04A	-	-
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F402	B04C	-	-
F403	B04C	-	-
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F615	B06A	-	-
F616	B06A	-	-
F801	B06C	-	-
F802	B06C	-	-
F805	B06C	-	-
F806	B06C	-	-
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F840	B06C	-	-
F841	B06C	-	-
F842	B06C	-	-
F843	B06C	-	-
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F851	B06C	-	-
F861	B06C	-	-
F869	B06C	-	-
F870	B06C	-	-
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FG42	B03D	-	-
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FH02	B03E	-	-
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FJ22	B03F	-	-
FJ23	B03F	-	-
FJ24	B03F	-	-
FJ25	B03F	-	-
FJ26	B03F	-	-
FJ27	B03F	-	-
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I322	B04A	-	-
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I337	B04A	-	-
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I359	B04A	-	-
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I363	B04A	-	-
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I376	B04A	-	-
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I383	B04A	-	-
I384	B04A	-	-
I387	B04A	-	-
I388	B04A	-	-
I389	B04A	-	-
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I391	B04A	-	-
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IA36	B07	-	-
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IA40	B07	-	-
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IK70	B03C	-	-
IK72	B03C	-	-
IK73	B03C	-	-
IK75	B03C	-	-
IK76	B03C	-	-
IK84	B03C	-	-
IK85	B03C	-	-
IL20	B04A	-	-
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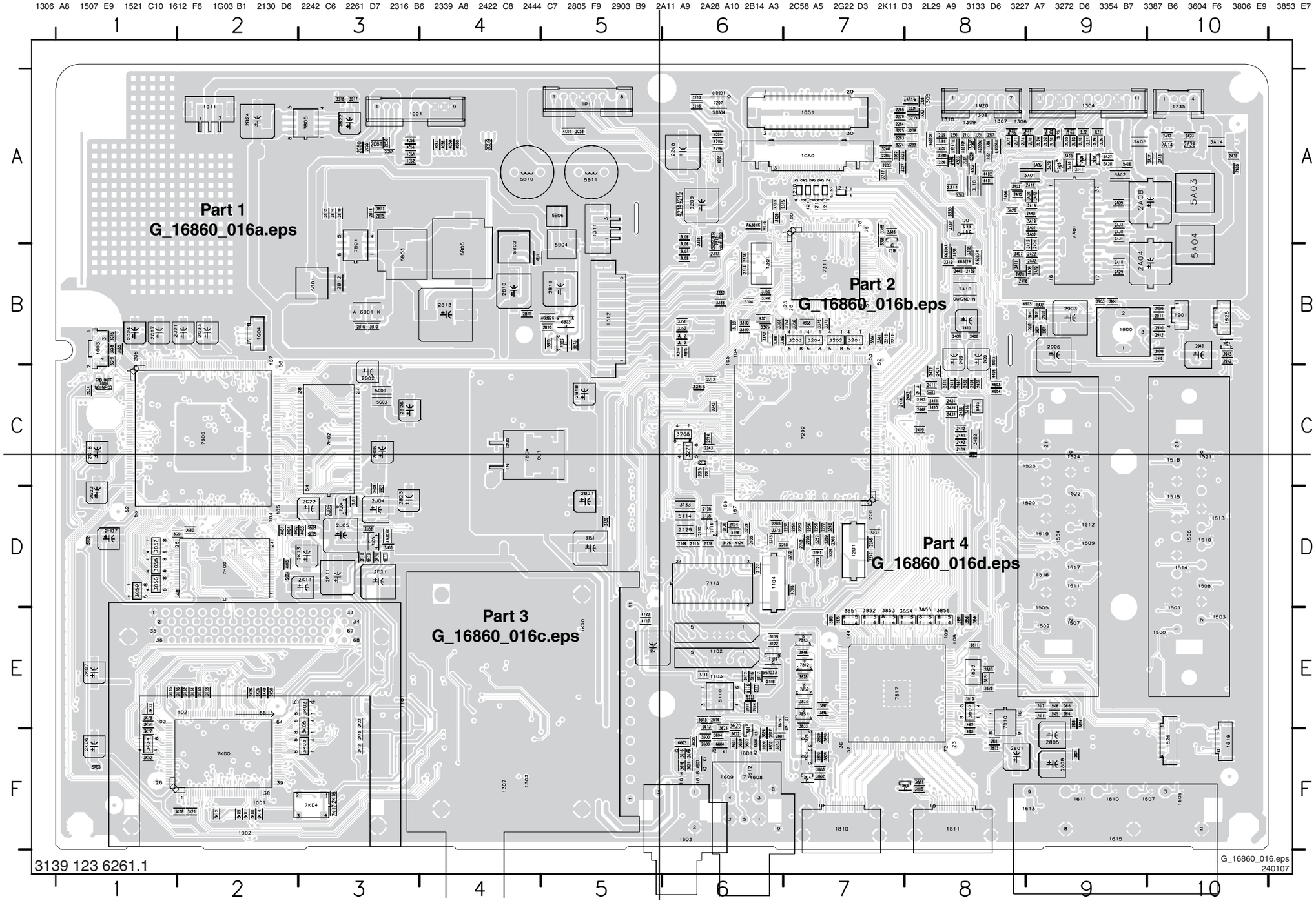
Layout Small Signal Board (Overview Top Side)



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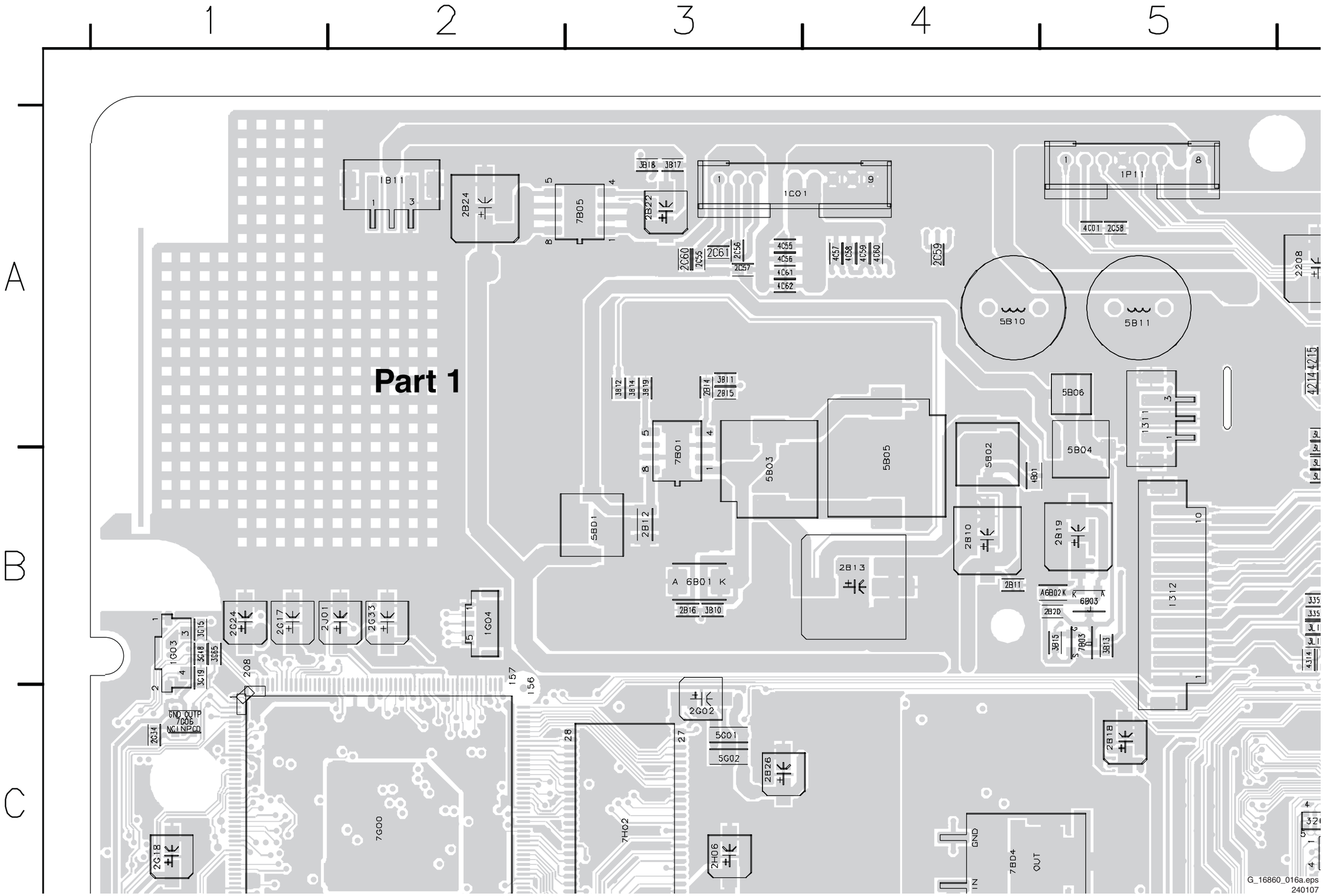
Layout Small Signal Board (Part 1 Top Side)



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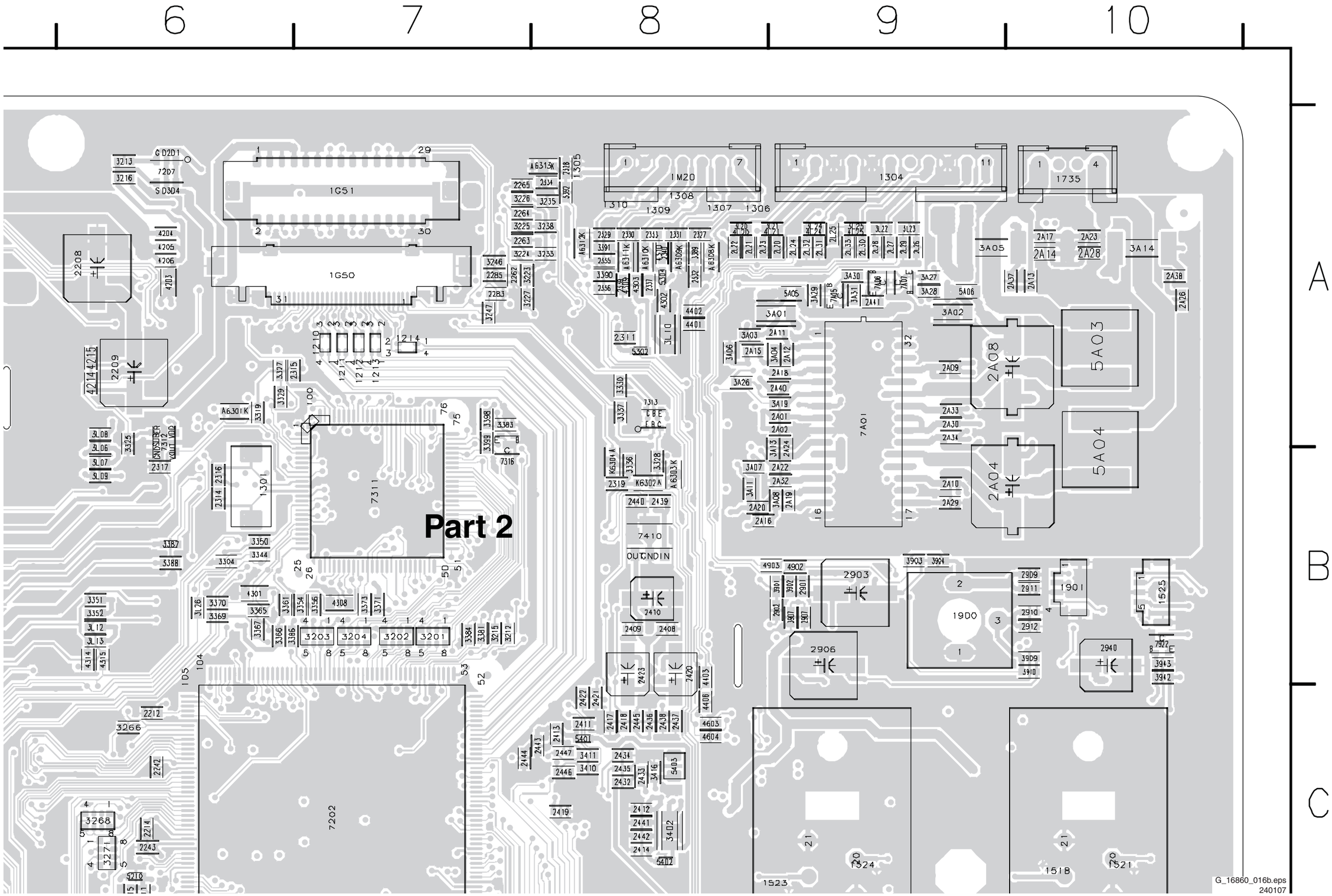

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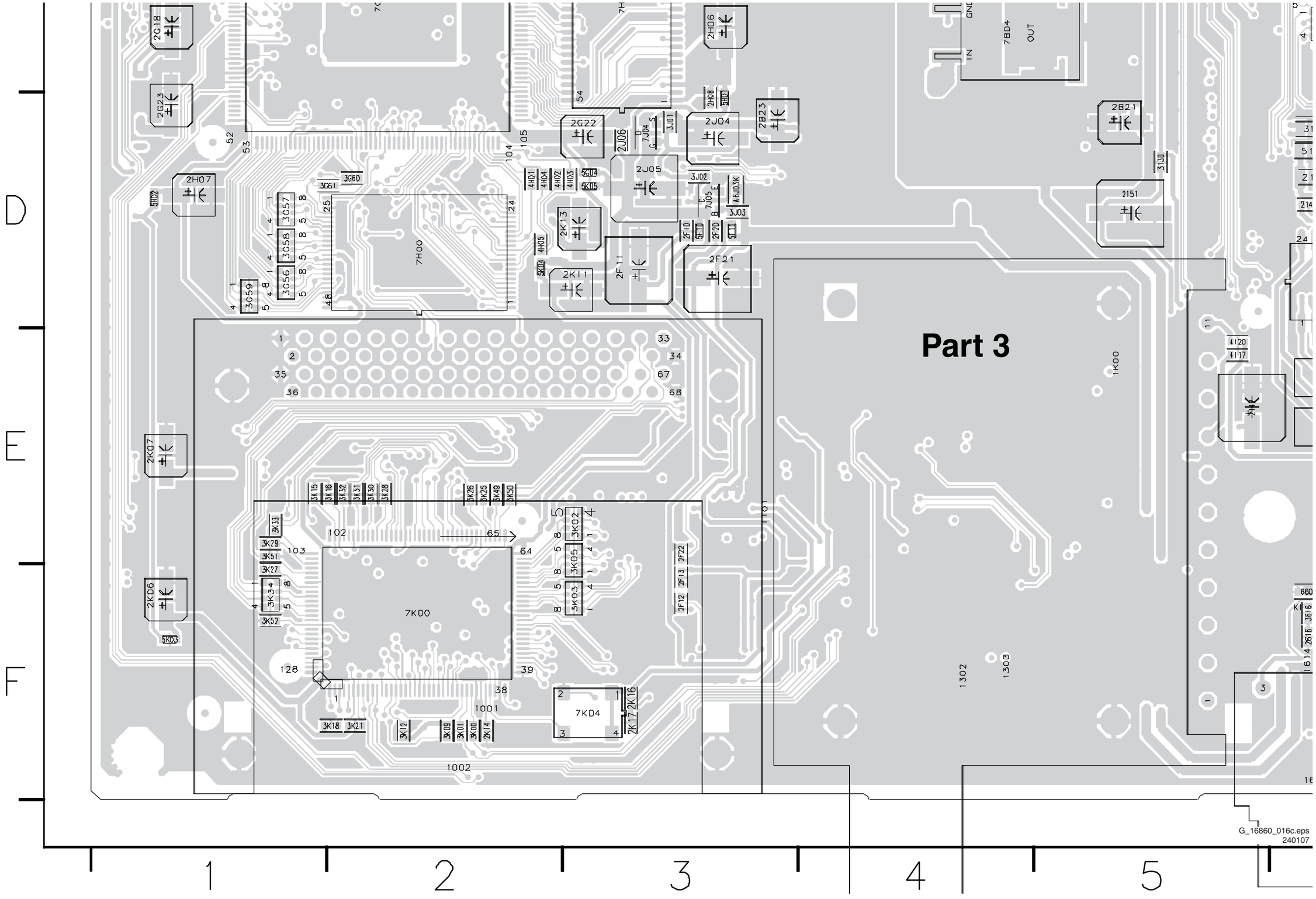

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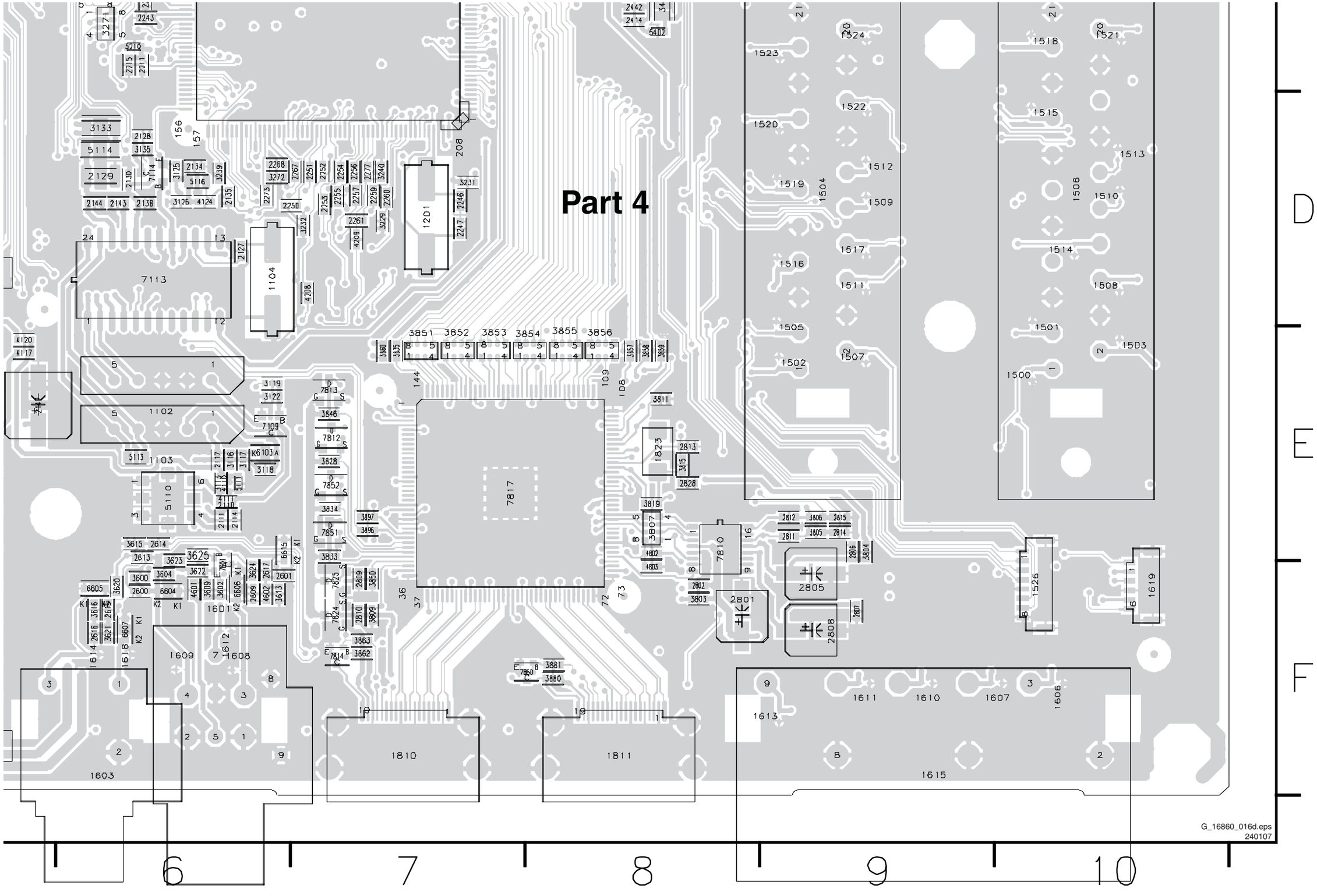

Layout Small Signal Board (Overview Bottom Side)

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1002 F9 2122 E6 2149 F7 2227 C5 2248 A5 2287 D4 2321 B4 2502 E2 2529 D3 2816 E3 2849 F3 2869 F4 2A36 B2 2F28 E7 2G14 C9 2J02 B9 2K02 E9 3128 D5 3242 C4 3264 C5 3313 A4 3338 A4 3362 A5 3396 A5 3515 E2 3533 D2 3607 F2 3884 E3 3938 B1 3K47 E9 6110 E7
1215 D4 2123 D5 2205 D4 2228 C5 2258 D4 2288 D4 2322 B4 2506 E2 2530 C1 2817 E3 2850 F4 2870 E4 2A45 A1 2F29 E7 2G15 C9 2J14 F9 2K03 E9 3129 D5 3243 C4 3265 C5 3314 A4 3339 A4 3363 A4 3397 B4 3516 D3 3535 C3 3608 F2 3885 E3 3940 B1 3K48 E9 6201 A5
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3F20 E7 4121 E6 6513 D2
3F21 F8 4122 F6 6514 D3
3F22 E7 4123 F6 6515 D3
3F23 E7 4125 F7 6516 D3
3F24 E7 4207 C4 6517 D3
3F25 E7 4210 C4 6518 E3
3F26 E7 4211 D4 6519 D3
3F27 E7 4212 D4 6520 D2
3F28 E7 4213 C4 6521 D2
3F29 E7 4306 A5 6522 E1
3F30 F8 4307 A5 6523 E2
3F31 F8 4313 B4 6524 D2
3F32 F8 4316 B5 6525 C2
3F33 F8 4323 B4 6610 F1
3F34 F8 4324 D3 6611 F2
3F40 F7 4325 D3 6612 F2
3F41 E7 4407 D4 6613 F2
3F42 E7 4408 D4 6614 F2
3F44 F7 4409 D3 6801 F4
3F46 E7 4410 D3 6802 F3
3F48 E7 4411 D3 6830 F4
3G11 B10 4412 D3 6831 F4
3G12 D10 4502 C2 6914 C1
3G16 C10 4504 C3 6916 B1
3G17 C10 4804 F4 6919 B1
3G18 C10 4805 F3 6J14 F9
3G20 D9 4901 B1 6J15 F9
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3G29 C9 4A02 A2 6J61 C8
3G30 C9 4F11 E7 6J62 C8
3G31 C9 4F12 E7 6J63 C9
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3G41 C10 4G31 C9 7206 C4
3G43 C10 4H00 D9 7208 A5
3G44 C10 4H12 B9 7210 A5
3G46 C10 4H15 D10 7211 D4
3G47 C10 4J14 F9 7213 D3
3G51 C9 4J15 F9 7214 D3
3G54 B9 5112 E6 7308 A4
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3G62 D9 5117 D5 7314 B5
3G63 C10 5118 D6 7315 B5
3H00 D9 5120 E6 7317 A4
3H05 D10 5121 F6 7320 A5
3H09 B9 5211 A5 7321 A5
3H10 B9 5212 D5 7322 A5
3H11 B9 5213 C4 7323 B4
3H12 B9 5214 C4 7411 C3
3H13 B9 5215 A5 7500 C2
3H14 C9 5216 C4 7502 C2
3J14 F9 5217 A5 7503 C3
3J15 F9 5218 D4 7504 C3
3J59 C9 5219 D4 7811 F3
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3J63 C8 5223 D5 7901 B2
3J64 C8 5224 C4 7902 B1
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3J66 C9 5226 C4 7912 B1
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3K06 E9 5228 C4 7914 B1
3K07 E8 5301 B4 7915 E1
3K08 D8 5810 E3 7916 C1
3K10 E9 5811 F4 7917 B1
3K11 F9 5812 E4 7919 B1
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3K17 E8 5814 E3 7B06 D7
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3K20 E9 5816 E3 7F01 F8
3K22 F9 5817 E3 7F02 C8
3K23 D10 5818 E3 7F03 F7
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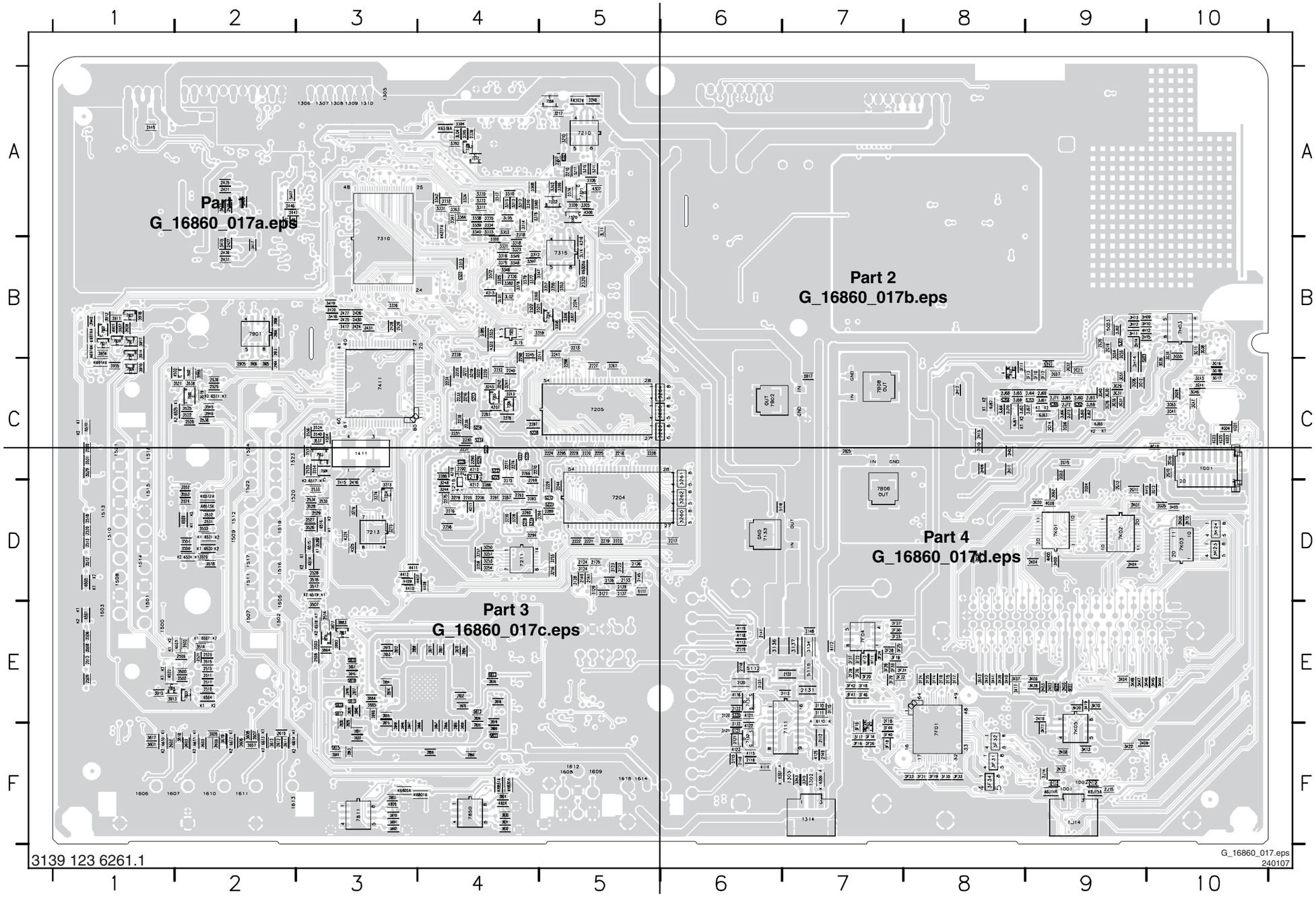
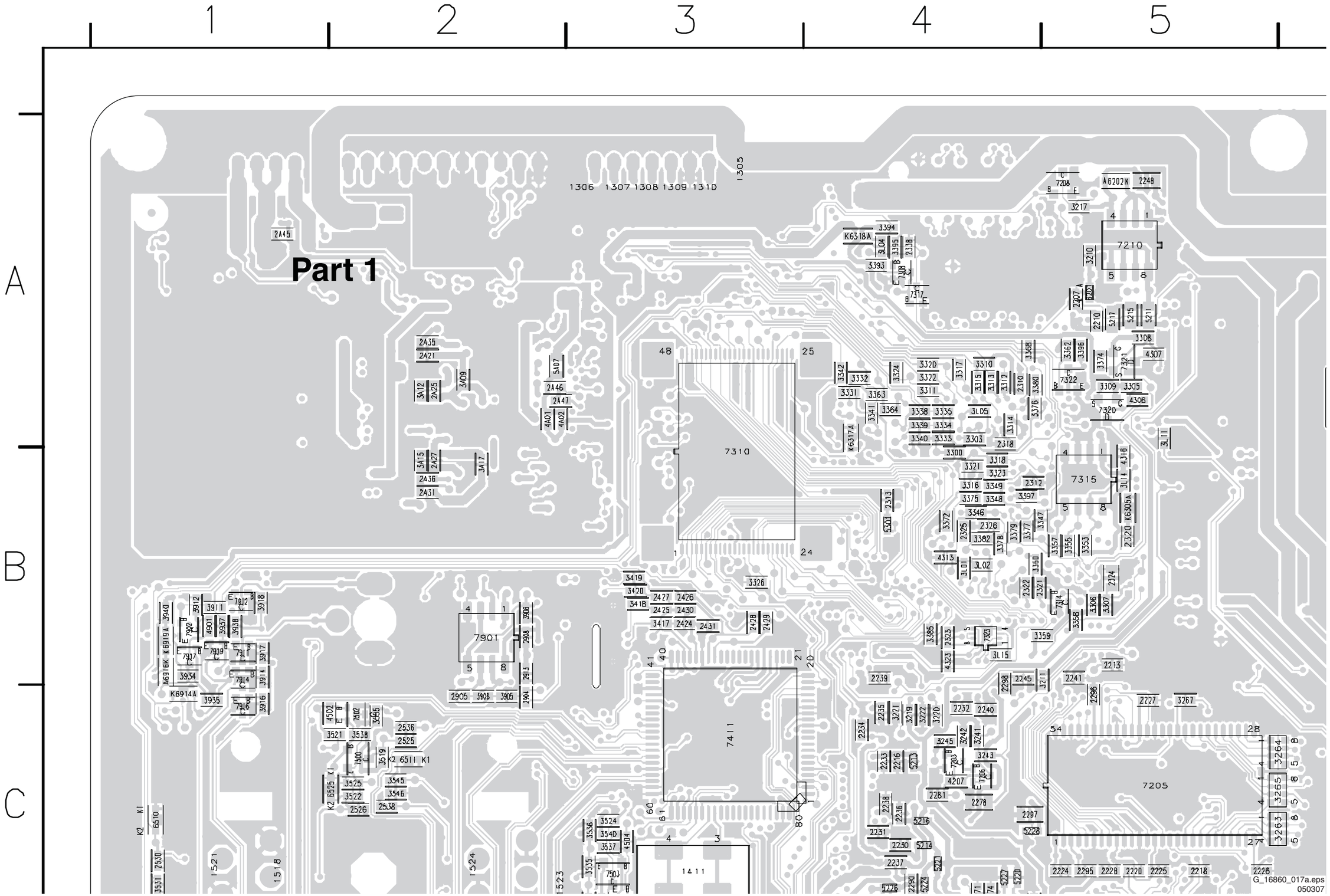
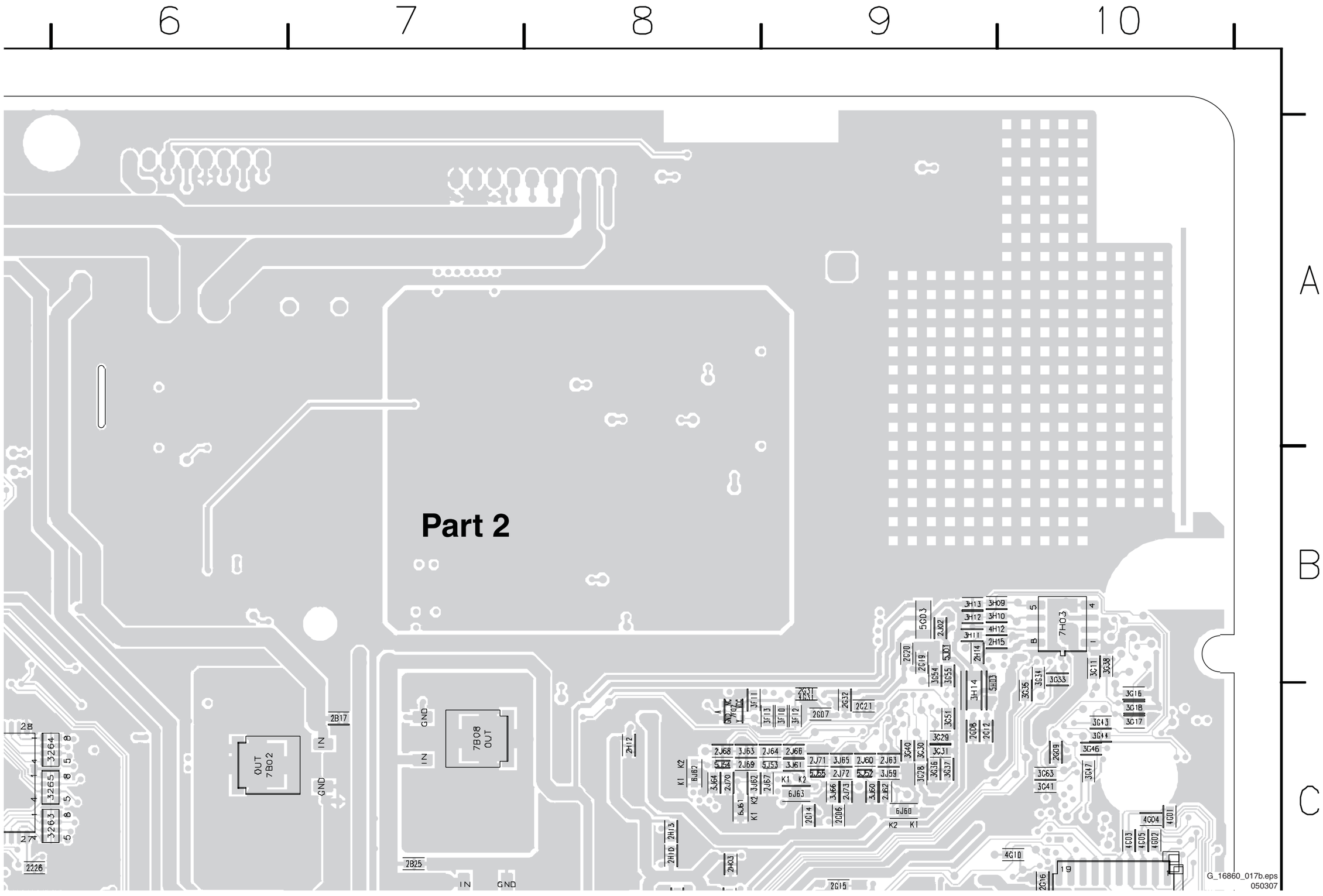


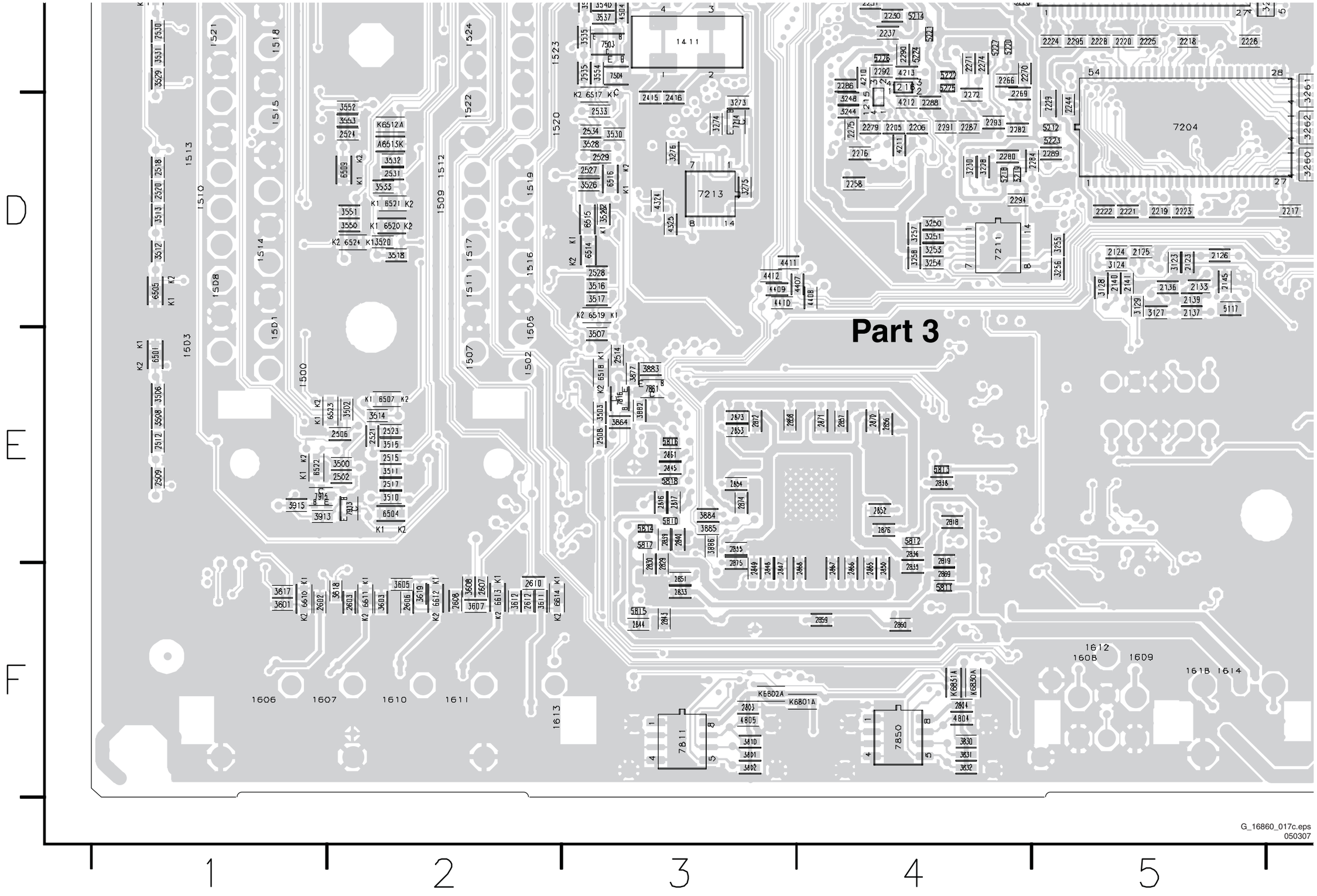
Layout Small Signal Board (Part 1 Bottom Side)



Layout Small Signal Board (Part 2 Bottom Side)



Layout Small Signal Board (Part 3 Bottom Side)



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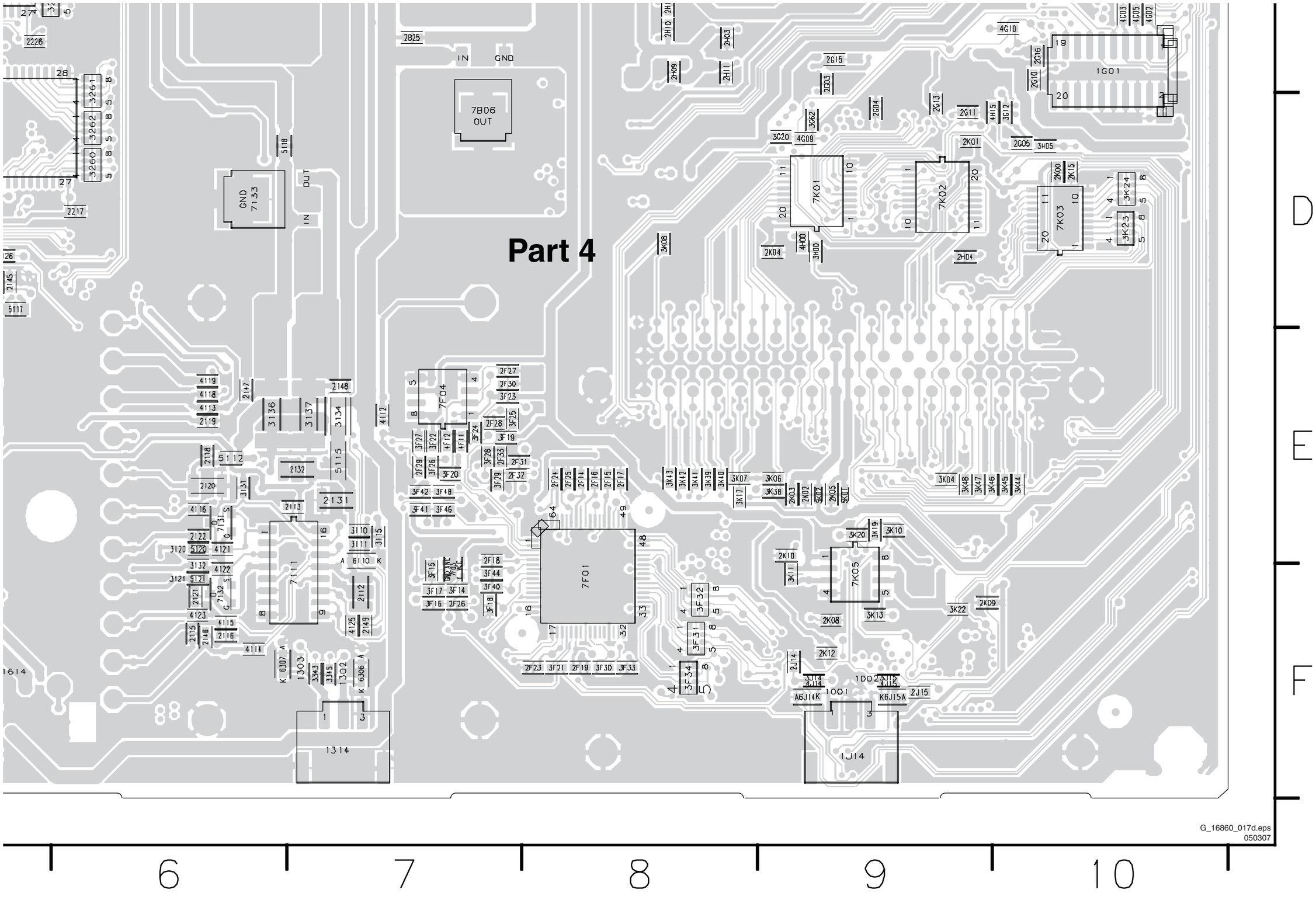
Layout Small Signal Board (Part 4 Bottom Side)



Side I/O Panel

REAR FACING SIDE I/O

SVHS
1301
YKF51-5359
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3
4
2
I301
I303
3303 10R
I304
4304
3304 100R
S301
2303 22p
6301 DF3A6.8
S302
6302 DF3A6.8
3302 75R
2301 47p
2302 47p
I302
6
5
7
3301 75R
4306
3305 10R
I305
3306 100R
2304 47p
CVBS
YELLOW
2
I307
1302-1 1
4307
3307 100R
I306
S303
2311 22p
6303 DF3A6.8
L
WHITE
5
4
1302-2 3
I308
3308 100R
S304
6304 DF3A6.8
3309 100K
2305 100p
I310
4301
4302
R
RED
8
7
1302-3 6
I309
3310 100R
S305
6305 DF3A6.8
3311 100K
2306 100p
HEADPHONE
1303
5
4
2
3
7
8
1
MSJ-035-18A SR
I313
I312
I311
4308
4309
S306
S307
S308
6306 DF3A6.8
6307 DF3A6.8
2307 22n
2308 22n
2309 10n
2310 10n
3312 10K
3313 10K

I314 FRONT_Y_CVBS_IN
I315 FRONT_C_IN
I316 L_FRONT_IN
I317 FRONT_DETECT
I318 R_FRONT_IN
I319 HEAD_PH_L
I320 HEAD_PH_R
1304
I321
TO 1M36 OF SSB BD
B Ø 3 A

1310
B3B-PH-K

TO 1M60 OF SSB BD
B Ø 5 A
1309
B4B-PH-K
I330
I331
I332
5300 220R
5301 220R
5302 220R
16V 100u
2312
I325
I326
I327
I328
I329
1308
1734366-1
USB
S310
S311
S312
4303

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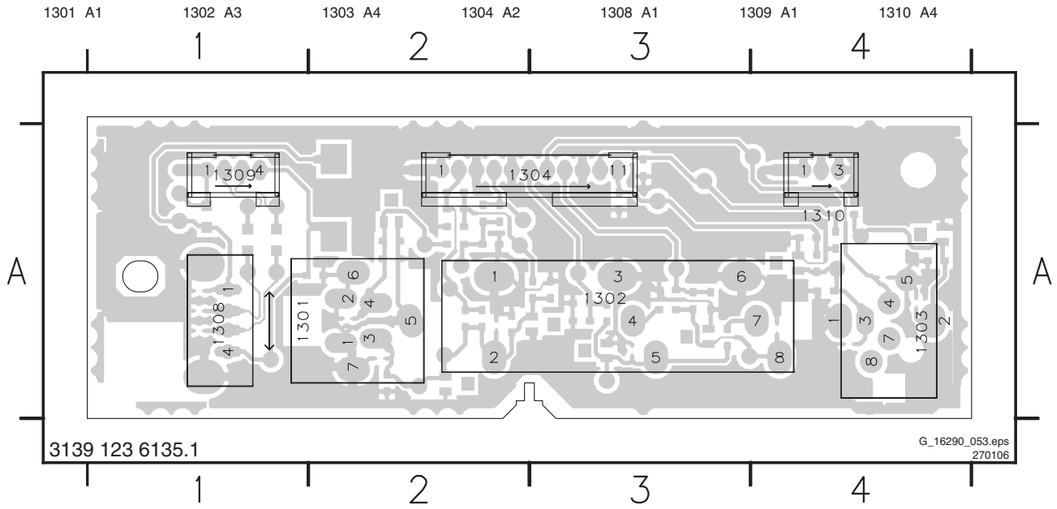
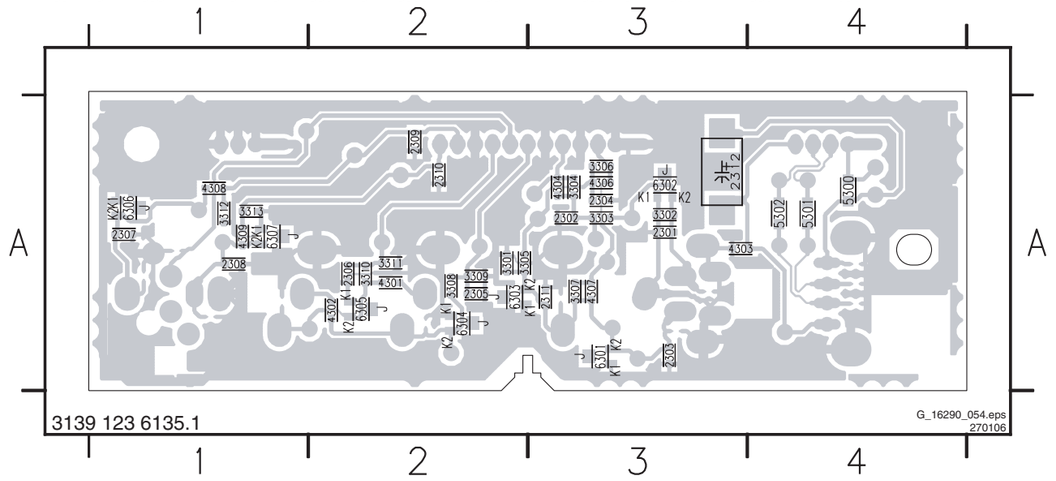
1301 A1
1302-1 C1
1302-2 D1
1302-3 E1
1303 E1
1304 B9
1308 E8
1309 E6
1310 C9
2301 B3
2302 B4
2303 B2
2304 B3
2305 D3
2306 E3
2307 F3
2308 F3
2309 F3
2310 F4
2311 C2
2312 E8
3301 B1
3302 B3
3303 A4
3304 A4
3305 B3
3306 B4
3307 C3
3308 D2
3309 D2
3310 D2
3311 E2
3312 F4
3313 F4
4301 D1
4302 D1
4303 E8
4304 A4
4306 B4
4307 C3
4308 E3
4309 E3
5300 E7
5301 E7
5302 E7
6301 B2
6302 B3
6303 C2
6304 D2
6305 E2
6306 F2
6307 F2
I301 A2
I302 B1
I303 A3
I304 A4
I305 B4
I306 C2
I307 C1
I308 D2
I309 D2
I310 D2
I311 E3
I312 E3
I313 F1
I314 B7
I315 B7
I316 B7
I317 B7
I318 C7
I319 C7
I320 C7
I321 C8
I325 E8
I326 E8
I327 E8
I328 E8
I329 E8
I330 E6
I331 E6
I332 E6
S301 B2
S302 B3
S303 C1
S304 D1
S305 E1
S306 F1
S307 F2
S308 F2
S310 E7
S311 E7
S312 E8

Layout Side I/O Panel (Top Side)



Layout Side I/O Panel (Bottom Side)

2301 A3	2305 A2	2309 A2	3301 A2	3305 A2	3309 A2	3313 A1	4304 A3	4309 A1	6301 A3	6305 A2
2302 A3	2306 A2	2310 A2	3302 A3	3306 A3	3310 A2	4301 A2	4306 A3	5300 A4	6302 A3	6306 A1
2303 A3	2307 A1	2311 A3	3303 A3	3307 A3	3311 A2	4302 A2	4307 A3	5301 A4	6303 A2	6307 A1
2304 A3	2308 A1	2312 A3	3304 A3	3308 A2	3312 A1	4303 A3	4308 A1	5302 A4	6304 A2	



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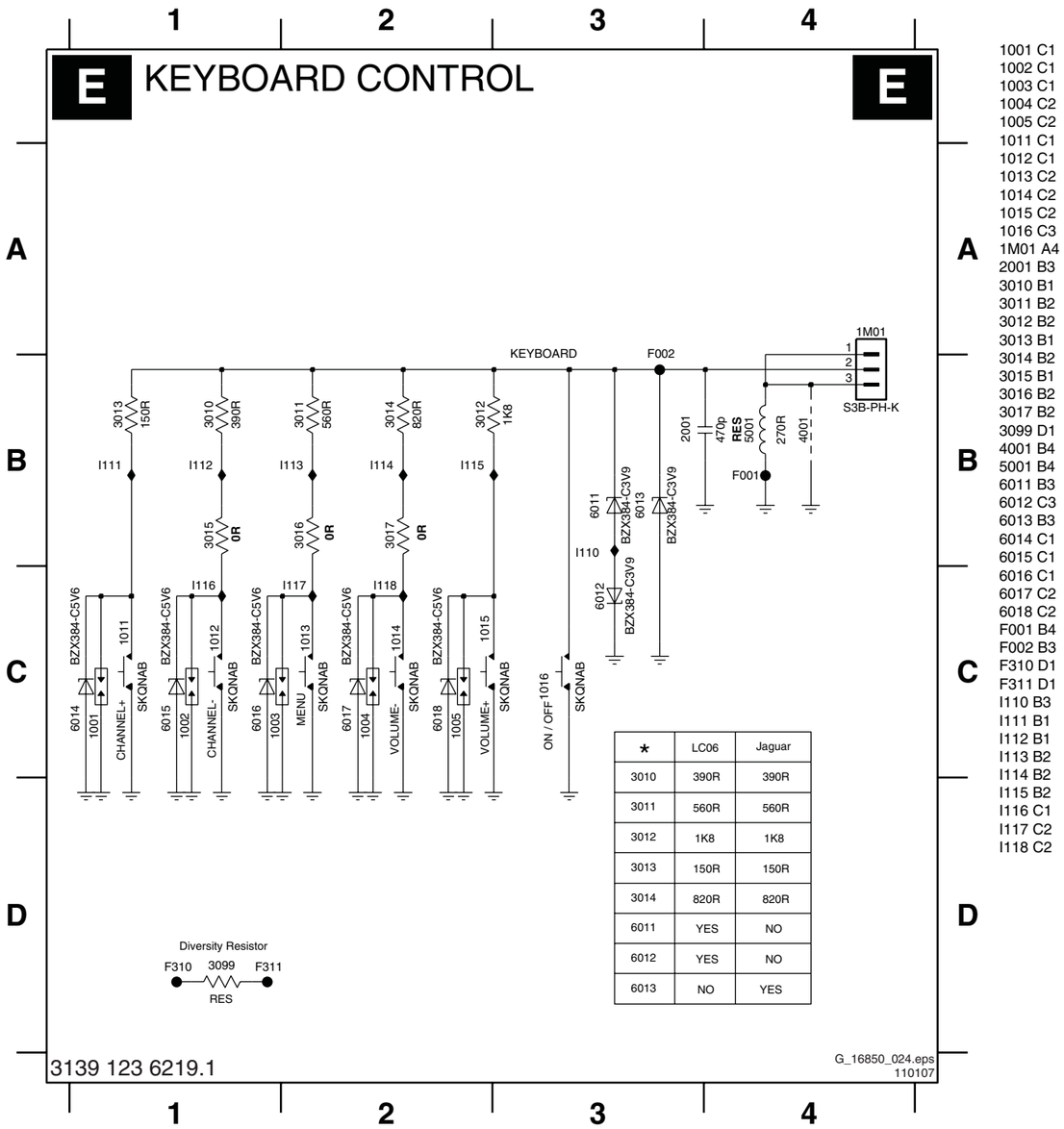
Keyboard Control Panel



*	LC06	Jaguar
3010	390R	390R
3011	560R	560R
3012	1K8	1K8
3013	150R	150R
3014	820R	820R
6011	YES	NO
6012	YES	NO
6013	NO	YES

Personal Notes:

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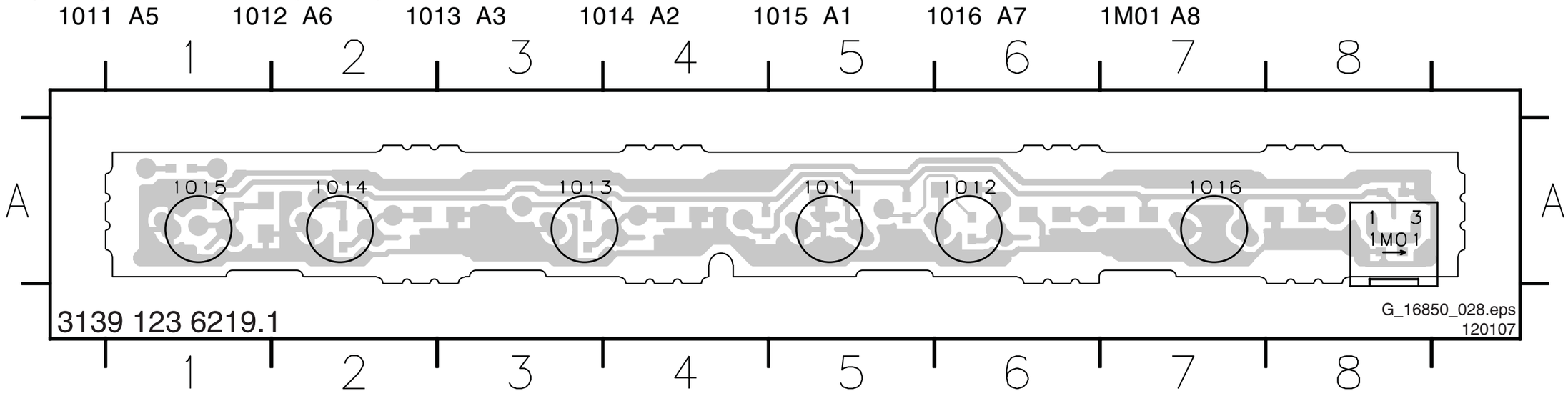
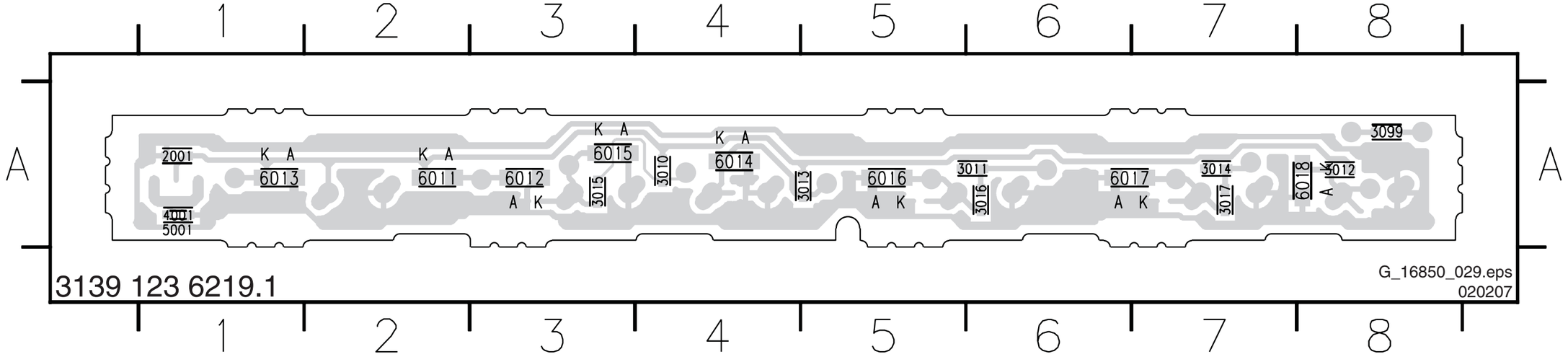
Layout Keyboard Control Panel (Top Side)

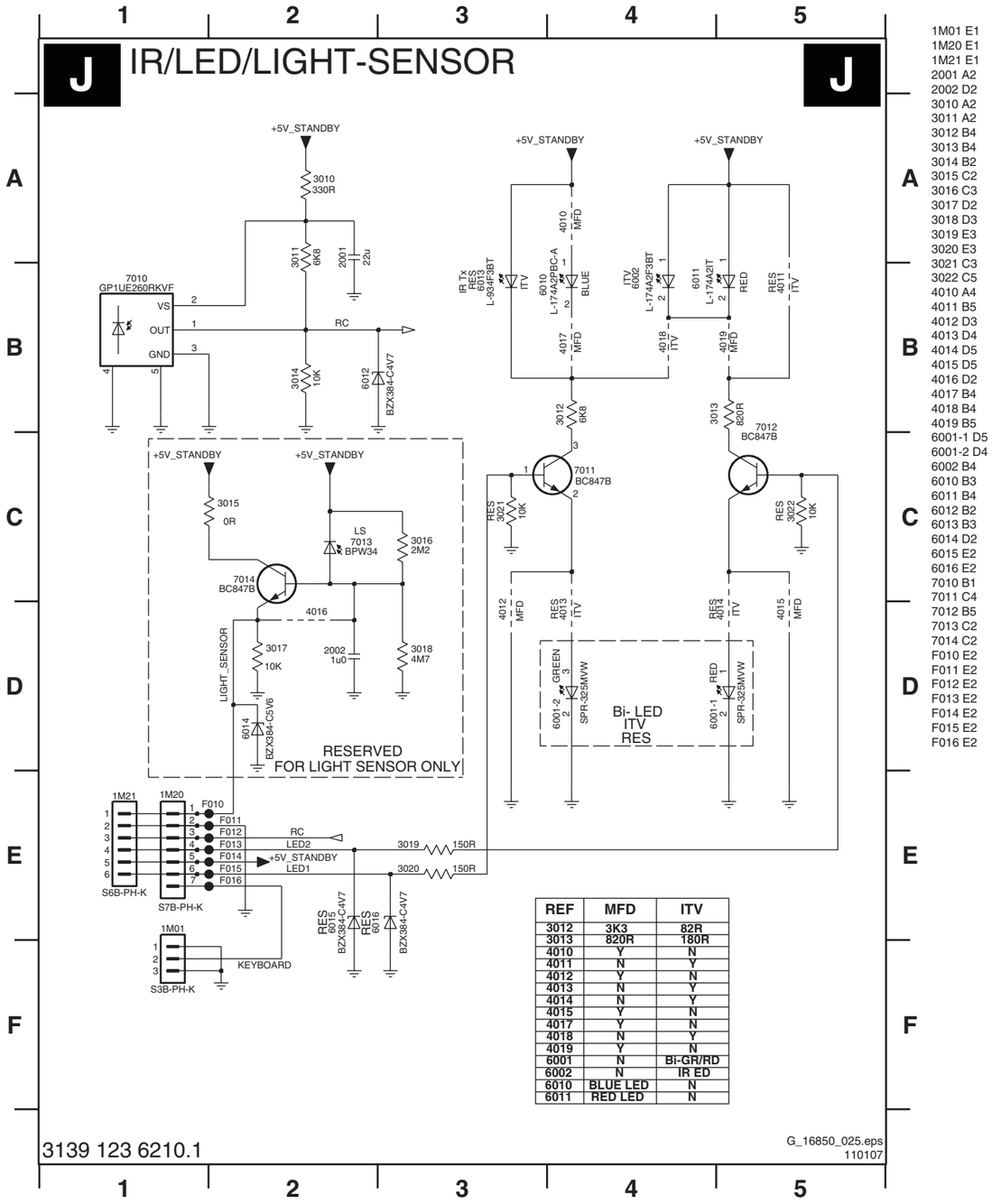


Layout Keyboard Control Panel (Bottom Side)

2001 A1 3011 A6 3013 A5 3015 A3 3017 A7 4001 A1 6011 A2 6013 A1 6015 A3 6017 A6
3010 A4 3012 A8 3014 A7 3016 A6 3099 A8 5001 A1 6012 A3 6014 A4 6016 A5 6018 A8



Front IR / LED Panel



REF	MFD	ITV
3012	3K3	82R
3013	820R	180R
4010	Y	N
4011	N	Y
4012	Y	N
4013	N	Y
4014	N	Y
4015	Y	N
4017	Y	N
4018	N	Y
4019	Y	N
6001	N	Bi-GR/RD
6002	N	IR ED
6010	BLUE LED	N
6011	RED LED	N

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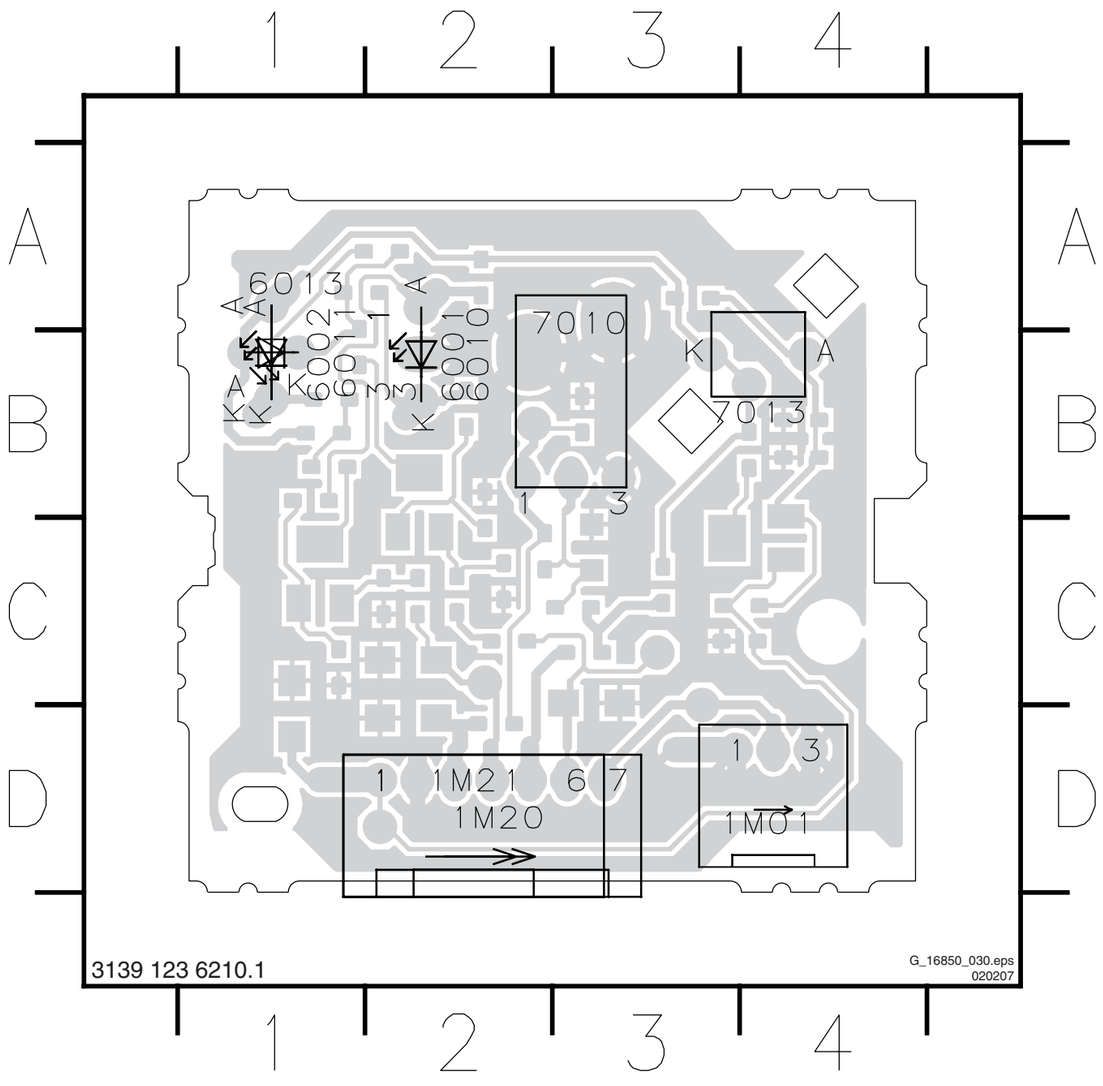
Layout Front IR / LED Panel (Top Side)

1M01	D4	6001	B2	6011	B1	7013	B4
1M20	D2	6002	B1	6013	A1		
1M21	D2	6010	B2	7010	A3		



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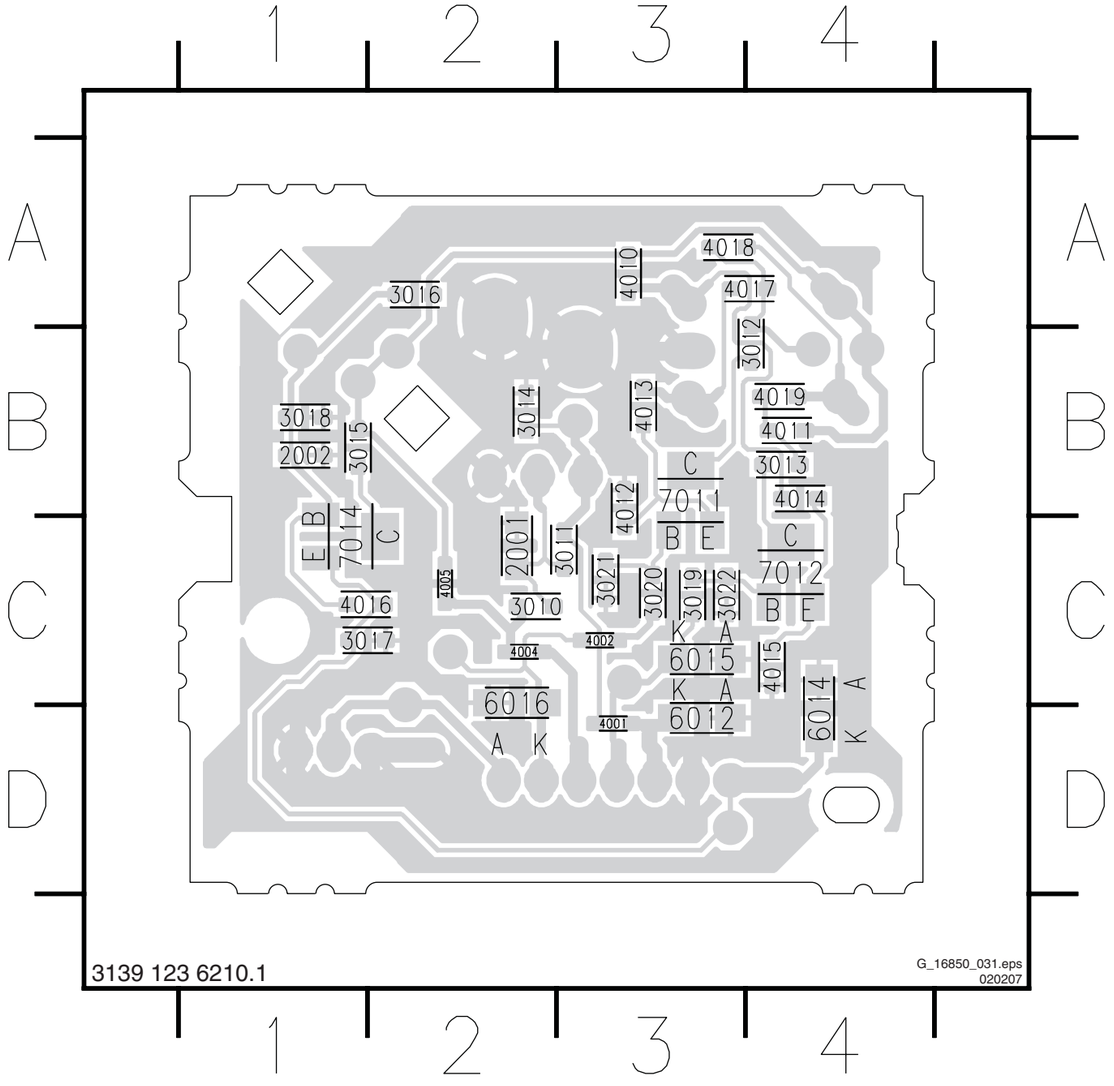
Layout Front IR / LED Panel (Bottom Side)

2001	C2	3014	B2	3020	C3	4005	C2	4015	C4	6014	D4
2002	B1	3015	B1	3021	C3	4010	A3	4016	C1	6015	C3
3010	C2	3016	A2	3022	C3	4011	B4	4017	A4	6016	C2
3011	C3	3017	C1	4001	D3	4012	B3	4018	A3	7011	B3
3012	B4	3018	B1	4002	C3	4013	B3	4019	B4	7012	C4
3013	B4	3019	C3	4004	C2	4014	B4	6012	D3	7014	C1



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Personal Notes:

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8. Alignments

Index of this chapter:

Note: Figures below can deviate slightly from the actual situation, due to the different set executions.

General: The Service Default Mode (SDM) and Service Alignment Mode (SAM) are described in chapter 5. Menu navigation is done with the CURSOR UP, DOWN, LEFT or RIGHT keys of the remote control transmitter.

8.1 General Alignment Conditions

Perform all electrical adjustments under the following conditions:
- Power supply voltage (depends on region):
  - AP-NTSC: 120 V_{AC} or 230 V_{AC} / 50 Hz (± 10%).
  - AP-PAL-multi: 120 - 230 V_{AC} / 50 Hz (± 10%).
  - EU: 230 V_{AC} / 50 Hz (± 10%).
  - LATAM-NTSC: 120 - 230 V_{AC} / 50 Hz (± 10%).
  - US: 120 V_{AC} / 60 Hz (± 10%).
- Connect the set to the mains via an isolation transformer with low internal resistance.
- Allow the set to warm up for approximately 15 minutes.
- Measure voltages and waveforms in relation to correct ground (e.g. measure audio signals in relation to AUDIO_GND).
  Caution: It is not allowed to use heatsinks as ground.
- Test probe: Ri > 10 Mohm, Ci < 20 pF.
- Use an isolated trimmer/screwdriver to perform alignments.

8.2 Hardware Alignments

There are no hardware alignments foreseen for this chassis, but below find an overview of the most important DC voltages on the SSB. These can be used for checking proper functioning of the DC/DC converters.

		Specifications (V)			
Description	Test Point	Min.	Typ.	Max.	Diagram
+AUDIO_POWER	FB21	11.40	12.00	12.60	B02_DC-DC
-AUDIO_POWER	FB23	-11.40	-12.00	-12.60	B02_DC-DC
+12V_DISP	FB34	11.40	12.00	12.60	B02_DC-DC
+8V	F401	7.60	8.00	8.40	B04C_Audio Proc.
+5V_STANDBY	FB27	4.94	5.20	5.46	B02_DC-DC
+5V_SW	FB16	4.93	5.19	5.45	B02_DC-DC
+5V_D	I411	4.75	5.00	5.25	B04C_Audio Proc.
+5V_AUD	I410	4.75	5.00	5.25	B04C_Audio Proc.
+5V_TUN	I115	4.75	5.00	5.25	B03_Tuner IF
+3V3_STBY	FB13	3.10	3.30	3.50	B02_DC-DC
+3V3_SW	FB17	3.1	3.3	3.5	B02_DC-DC
+3V3_MOJO	FB19	3.1	3.3	3.5	B02_DC-DC
+3V3	FJ01	3.2	3.27	3.4	B03F_DVB-MOJO[1)]
+3V3FE	FF14	3.2	3.27	3.4	B03B_DVB-Demod[1)]
+1V8S_SW	FB11	1.70	1.80	1.90	B02_DC-DC
+1V2_MOJO	FB20	1.18	1.25	1.31	B02_DC-DC[1)]
+1V2_CORE	FG39	1.14	1.24	1.34	B03D_DVB-MOJO[1)]
VDISP	F210	11.40	12.00	12.60	B04B_Video proc.

Note
1). These voltages only apply to digital sets (LC7.2x chassis).

8.3 Software Alignments

With the software alignments of the Service Alignment Mode (SAM) the Tuner and RGB settings can be aligned.

To store the data: Use the RC button “Menu” to switch to the main menu and next, switch to “Stand-by” mode.

8.3.1 Tuner Adjustment (RF AGC Take Over Point)

Purpose: To keep the tuner output signal constant as the input signal amplitude varies.

The LC7.xx chassis comes with two tuner types: the UV1318S for the analogue sets (LC7.1x) and the TD1316AF for the hybrid sets (LC7.2x).

For the digital tuner TD1316AF, no alignment is necessary, as the AGC alignment is done automatically (standard value: “15”), even during analogue reception.

The analogue tuner UV1318S can also use the default value of “15”, however in case of problems use the following method (use multimeter and RF generator):
- Apply a vision IF carrier of 38.9 MHz (105 dBuV = 178 mVrms) to test point F111 (input via 50 ohm coaxial cable terminated with an RC network of series 10nF with 120 ohm to ground).
- Measure voltage on pin 1 of the tuner.
- Adjust AGC (via SAM menu: TUNER -> AGC), until voltage on pin 1 is 3.3 +0.5/-1.0 V.
- Store settings and exit SAM.

8.3.2 RGB Alignment

Before alignment, choose “TV MENU” -> “Picture” and set:
- “Brightness” to “50”.
- “Colour” to “50”.
- “Contrast” to “100”.

White Tone Alignment:
- Activate SAM.
- Select “RGB Align.” -> “White Tone” and choose a colour temperature.
- Use a 100% white screen as input signal and set the following values:
  - All “White point” values initial to “256”.
  - All “BlackL Offset” values to “0”.

In case you have a colour analyser:
- Measure with a calibrated (phosphor- independent) colour analyser (e.g. Minolta CA-210) in the centre of the screen. Consequently, the measurement needs to be done in a dark environment.
- Adjust the correct x,y coordinates (while holding one of the White point registers R, G or B on “256”) by means of decreasing the value of one or two other white points to the correct x,y coordinates (see table “White D alignment values”). Tolerance: dx: ± 0.004, dy: ± 0.004.
- Repeat this step for the other colour Temperatures that need to be aligned.
- When finished return to the SAM root menu and press STANDBY on the RC to store the aligned values to the NVM.

Table 8-1 White D alignment values

Value	Cool (11000 K)	Normal (9000 K)	Warm (6500 K)
x	0.276	0.287	0.314
y	0.282	0.296	0.324

If you do **not** have a colour analyser, you can use the default values. This is the next best solution. The default values are average values coming from production (statistics).

- Set the RED, GREEN and BLUE default values per temperature according to the values in the “Tint settings” table.
- When finished return to the SAM root menu and press STANDBY on the RC to store the aligned values to the NVM.

Table 8-2 Tint settings 42”

Colour Temp.	R	G	B
Cool	255	247	250
Normal	255	243	234
Warm	255	228	196

Black Level Offset Alignment

- Activate SAM.
- Select “RGB Align.” -> “BlackL Offset” and choose a colour.
- Set all “BlackL Offset” values per temperature according to the values in the “Black level offset settings” table.
- When finished return to the SAM root menu and press STANDBY on the RC to store the aligned values to the NVM.

Table 8-3 Black level offset settings 42”

Black-level offset	R	G	B
Black-level offset	3	-9	95

ADC YPbPr Gray Scale Alignment

When the grey scale is not correct, use this alignment:

- Activate SAM.
- Select “NVM Editor”.
- Enter address “26(dec)” (ADR).
- Set value (VAL) to “197(dec) ± 25”.
- Store (STORE) the value.

8.4 Option Settings

8.4.1 Introduction

The microprocessor communicates with a large number of I^2C ICs in the set. To ensure good communication and to make digital diagnosis possible, the microprocessor has to know which ICs to address. The presence/absence of these specific ICs (or functions) is made known by the option codes.

Notes:

- After changing the option(s), save them with the STORE command.
- The new option setting becomes active after the TV is switched "off" and "on" again with the mains switch (the EAROM is then read again).

8.4.2 How To Set Option Codes

When the NVM is replaced, all options will require resetting. To be certain that the factory settings are reproduced exactly, you must set all option numbers. You can find the correct option numbers in table “Option Codes OP1...OP7“ below.

How to Change Options Codes

An option code (or “option byte”) represents eight different options (bits). When you change these numbers directly, you can set all options very quickly. All options are controlled via seven option bytes (OP1... OP7).
Activate SAM and select “Options”. Now you can select the option byte (OP1.. OP7) with the CURSOR UP/ DOWN keys, and enter the new 3 digit (decimal) value. For the correct factory default settings, see the next table “Option codes OP1...OP7“. For more detailed information, see the second table “Option codes at bit level“. If an option is set (value “1”), it represents a certain decimal value.
When all the correct options (bits) are set, the sum of the decimal values of each Option Byte (OP) will give the option code.

If you do not have a picture (i.e. after an SSB or display exchange), it is required to set the display option code first after such a repair. Refer to section “Display Option Code Selection” in chapter 5 “Service Modes, Error Codes, and Fault Finding” for details. Refer to table “Option codes OP1 ...OP7 (for all LC7.1E models)” for the correct display option code.

Sets 12NC	Sets Type	Panel Type	Panel Code (Dec)	Option Byte						
LC07_PDP 42” (/10 - /12)				Group 1				Group 2		
				1	2	3	4	5	6	7
867000025494	42PFP5332/10	SDI : 42 HD W2	083	003	007	011	223	009	000	003
		LG : 42 HD X4	084							
867000025495	42PFP5332/12	SDI : 42 HD W2	083							
		LG : 42 HD X4	084							

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Figure 8-1 Option codes OP1...OP7

Option Bit Overview
Below find an overview of the Option Codes on **bit** level.

Table 8-4 Option codes at bit level (OP1-OP4)

Option Byte & Bit	Dec. Value	Option Name	Description
Byte OP1			
Bit 7 (MSB)	128	Reserved	Not Used (Reserved)
Bit 6	64	CHINA	ON = SW is for CHINA only OFF = SW is for Non-China AP cluster
Bit 5	32	DTV_CHINA	ON = DTV_CHINA will be available (Reserved) OFF = DTV_CHINA will not be available
Bit 4	16	DTV_EU	ON = DTV will be available OFF = DTV will not be available
Bit 3	8	UK_PNP	ON = UK PNP is available OFF = UK PNP is not available
Bit 2	4	VIRGIN_MODE	ON = Virgin Mode (PNP) is available OFF = Virgin Mode (PNP) is not available
Bit 1	2	ACI	ON = ACI is available OFF = ACI is not available
Bit 0 (LSB)	1	ATS	ON = ATS is available OFF = ATS is not available
Total DEC Value			
Byte OP2			
Bit 7 (MSB)	128	1080P	ON = 1080p is available OFF = 1080p is not available
Bit 6	64	LIGHT_SENSOR	ON = Light Sensor is available OFF = Light Sensor is not available
Bit 5	32	AMBILIGHT	ON = Ambilight Feature will be available OFF = Ambilight Feature will not be available
Bit 4	16	BACKLIGHT_DIMMING	ON = Backlight Dimming is available OFF = Backlight Dimming is not available
Bit 3	8	HUE	ON = Hue is available OFF = Hue is not available
Bit 2	4	2D3DCF	ON = 3D Comb Filter is available OFF = 2D Comb Filter is available
Bit 1	2	WSSB	ON = WSS is available OFF = WSS is not available
Bit 0 (LSB)	1	WIDE_SCREEN	ON = TV is 16x9 set OFF = TV is 4x3 set
Total DEC Value			
Byte OP3			
Bit 7 (MSB)	128	CVI2	ON=CVI1 (YPbPr) (For ROW)
Bit 6	64	Reserved	Not Used (Reserved)
Bit 5	32	Reserved	Not Used (Reserved)
Bit 4	16	VCHIP	ON = VChip is available OFF = VChip is not available
Bit 3	8	VIDEO_TEXT	ON = Video-TXT is available OFF = Video-TXT is not available
Bit 2	4	STEREO_DBX	ON = Stereo DBX detection is available (LATAM) OFF = Stereo DBX detection is not available
Bit 1	2	STEREO_NICAM_2CS	ON = Stereo NICAM 2CS detection is available (EU/AP/China) OFF = Stereo NICAM 2CS detection is not available
Bit 0 (LSB)	1	LIP_SYNC	ON = Lip Sync is available OFF = Lip Sync is not available
Total DEC Value			
Byte OP4			
Bit 7 (MSB)	128	HDMI2	ON = HDMI2 is available OFF = HDMI2 is not available
Bit 6	64	HDMI1	ON = HDMI1 is available OFF = HDMI1 is not available
Bit 5	32	VGA	ON = VGA is available OFF = VGA is not available
Bit 4	16	SVHS3	ON = SVHS3 is available OFF = SVHS3 is not available
Bit 3	8	AV3	ON = AV3 is available OFF = AV3 is not available
Bit 2	4	CVI	ON = CVI is available OFF = CVI is not available
Bit 1	2	SVHS2	ON = SVHS2 is available OFF = SVHS2 is not available
Bit 0 (LSB)	1	AV2	ON = AV2 is available OFF = AV2 is not available
Total DEC Value			

Table 8-5 Option codes at bit level (OP5-OP7)

Option Byte & Bit	Dec. Value	Option Name	Description
Byte OP5			
Bit 7 (MSB)	128	NVM_CHECK	ON = NVM (range) checking is available OFF = NVM (range) checking is not available
Bit 6	64	Reserved	Not Used (Reserved)
Bit 5	32	Reserved	Not Used (Reserved)
Bit 4	16	MP_ALIGN	ON = Using multi-point alignment for Gamma & White Point OFF = Using old way for Gamma (pre-defined) & WP alignment
Bit 3	8	SYS_RECVRY	ON = System Recovery is available OFF = System Recovery is not available
Bit 2	4	SL_WIRED	ON = BDS Smart Loader Wired is available OFF = BDS Smart Loader Wired is not available
Bit 1	2	HOTEL	ON = Hotel/BDS is available OFF = Hotel/BDS is not available
Bit 0 (LSB)	1	SS_DEMO	ON = Split Screen Demo is available OFF = Split Screen is not available
Total DEC Value			
Byte OP6			
Bit 7 (MSB)	128	Reserved	Not Used (Reserved)
Bit 6	64	Reserved	Not Used (Reserved)
Bit 5	32	Reserved	Not Used (Reserved)
Bit 4	16	Reserved	Not Used (Reserved)
Bit 3	8	TUNER PROFILE	0 = ATV_EU_PHILIPS UV1318S/AIH-3 1 = ATV_EU_Panasonic EN57K28G3F2 = DTV_EU_PHILIPS TD1316AF/IHP-24 = ATV_AP_PHILIPS UV1316E/AIH-45 = ATV_AP_Tuner2 (Reserved)6 = ATV_CHINA_ALPS TEDE9-286B7 = ATV_CHINA_Tuner2 (Reserved)8 = ATV_LATAM_PHILIPS UV1338/AIH-4 9 = ATV_LATAM_Tuner2 (Reserved)10 = DTV_CHINA_Tuner1 (Reserved)11 = DTV_CHINA_Tuner2 (Reserved)12 = Not Used (Reserved)13 = Not Used (Reserved)14 = Not Used (Reserved)15 = Not Used (Reserved)
Bit 2	4		
Bit 1	2		
Bit 0 (LSB)	1		
Total DEC Value			
Byte OP7			
Bit 7 (MSB)	128	Reserved	Not Used (Reserved)
Bit 6	64	Reserved	Not Used (Reserved)
Bit 5	32	Reserved	Not Used (Reserved)
Bit 4	16	CABINET PROFILE	0 = Cabinet_Profile_26_LCD_ME7 1 = Cabinet_Profile_32_LCD_ME7 2 = Cabinet_Profile_37_42_47_LCD_ME73 = Cabinet_Profile_42_50_PDP_ME7 4 = Cabinet_Profile_26_LCD_ME5P5 - 32 = Reserved
Bit 3	8		
Bit 2	4		
Bit 1	2		
Bit 0 (LSB)	1		
Total DEC Value			

9. Circuit Descriptions, Abbreviation List, and IC Data Sheets

Index of this chapter:

Notes:

- Only **new** circuits (circuits that are not published recently) are described.
- Figures can deviate slightly from the actual situation, due to different set executions.
- For a good understanding of the following circuit descriptions, please use the Wiring, Block (chapter 6) and Circuit Diagrams (chapter 7). Where necessary, you will find a separate drawing for clarification.

9.1 Introduction

The LC7.x (development name “LC07”) is a new global chassis for the year 2007 (LC7.1 is the analogue range, LC7.2 is the digital range). It is the successor of the LC4.x chassis, and covers a screen size of 26 to 47 inch for LCD and 42 to 50 inch for Plasma sets with a new styling called “ME7”. Some key components are:

- **Audio**: Sound processing is performed by a multi-standard sound processor MSP4450 (item 7411)
- **Video**: Video processing is performed by the Trident video processor SVP CV32-LF (item 7202).

For analogue reception, a standard IF demodulator is used, whereas digital input signals (DVB-T; LC7.2x chassis) are processed through a COFDM channel decoder together with an MPEG decoder (integrated on the SSB). A so-called “Reneas” microprocessor performs the control functionality.

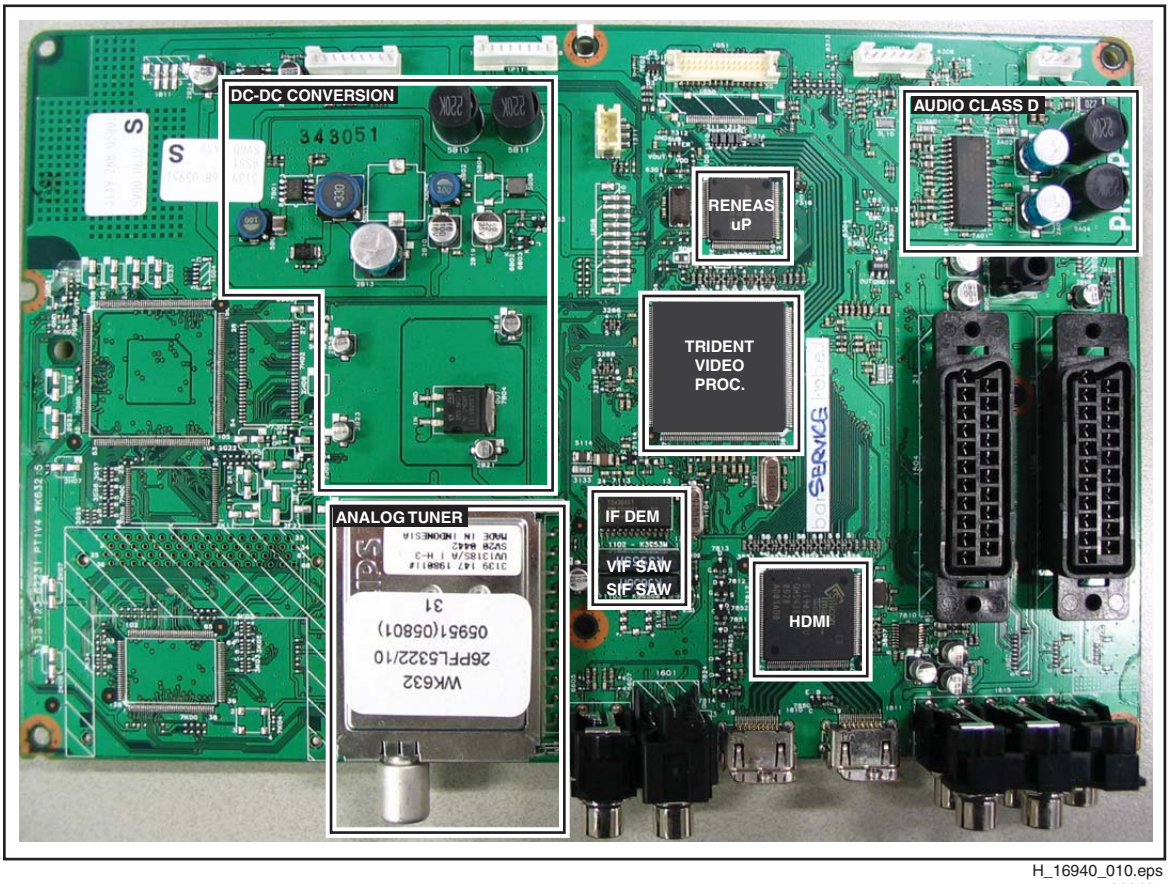

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Figure 9-1 SSB top view

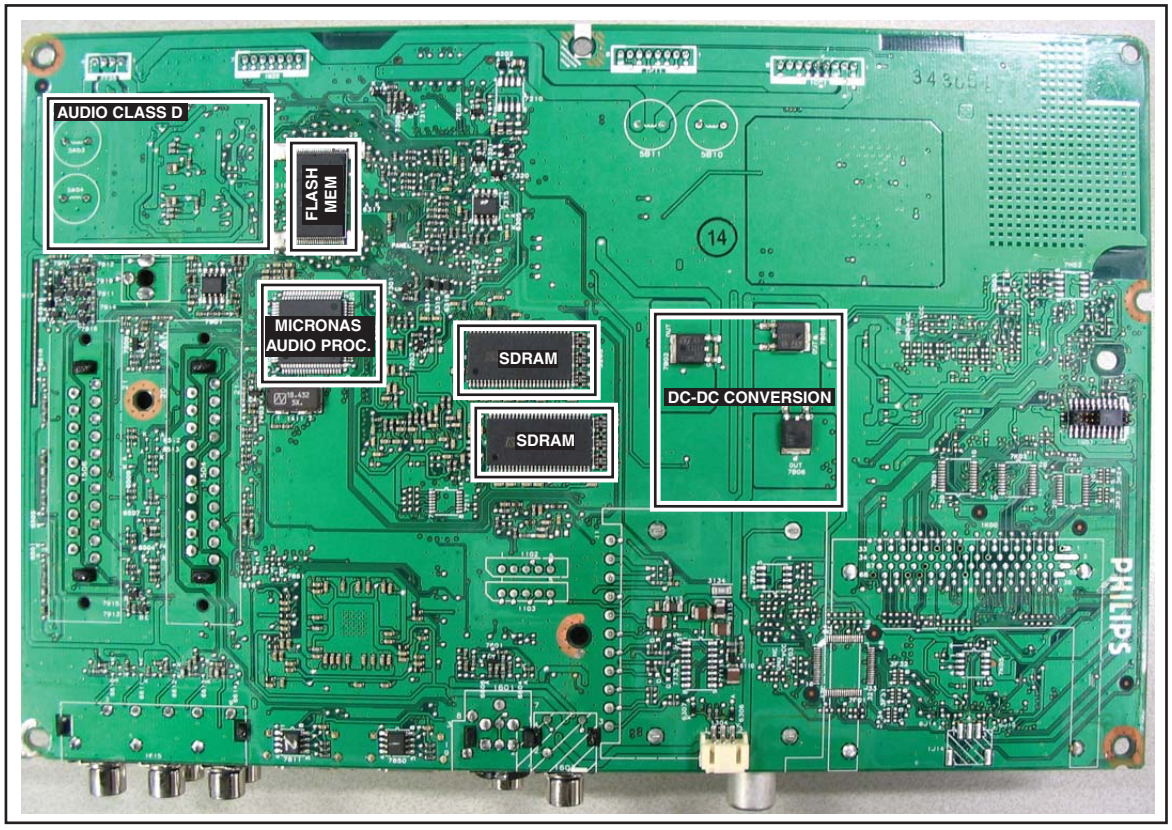


Figure 9-2 SSB bottom view

9.2 PDP Power Supply

The Power Supply Unit (PSU) in this chassis is a buy-in and is a black-box for Service. It belongs to the PDP and when defective, a new panel must be ordered and the defective panel must be returned for repair, unless one of the fuses of the unit is broken. Always replace the fuse with one of the correct specifications! This part is commonly available in the regular market. For the correct order number, refer to the SDI PDP Service Manual (order code see front page of this manual). The 42” and 50” supply units have different specifications.

Figure “Overview of PSU connectivity” shows the connectivity of the Power Supply Unit with the other panels in the set.

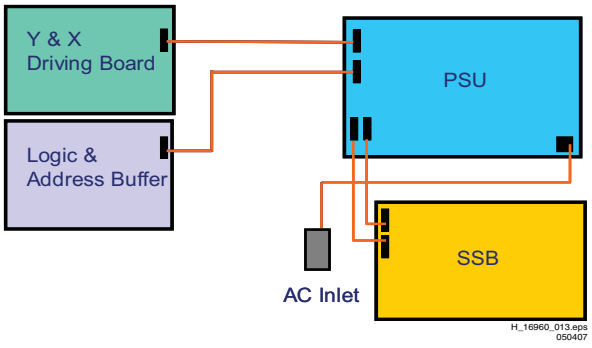


Figure 9-3 Overview of PSU connectivity

All Power Supply Units deliver the following voltages / signals to the chassis:

- +12 V to SSB (+12V_DISP).
- +12 V and -12 V to Audio Supply (-AUDIO_POWER, +AUDIO_POWER).
- + 5 V switch voltage (+5V+SW).
- +5.2 V standby voltage (+5V_STANDBY).

9.3 DC/DC converters

A switch generates the +5.2 V (+5V_SW) from the +5.2 V (+5V_STANDBY) supply voltage. For LCD sets, this switch is mounted on-board the SSB. For PDP sets, this switch is mounted on the Power Supply Panel. This results in the +5V_STANDBY (and +5V_SW for PDP sets) voltage(s), coming from the Power Supply Unit, is (are) used as input for the on-board DC/DC converters.
They deliver the following voltages to the board:

- +3.3 V (+3V3_STBY)
- +5.2 V (+5V_SW) (only for LCD sets)
- +1.8 V (+1V8S_SW)
- +34 V (+VTUN)
- +3.3 V (+3V3_SW)
- +3.3 V (+3V3_MOJO)
- +1.2 V (+1V2_MOJO)

An overview can be found in figure “DC-DC converter block diagram”.

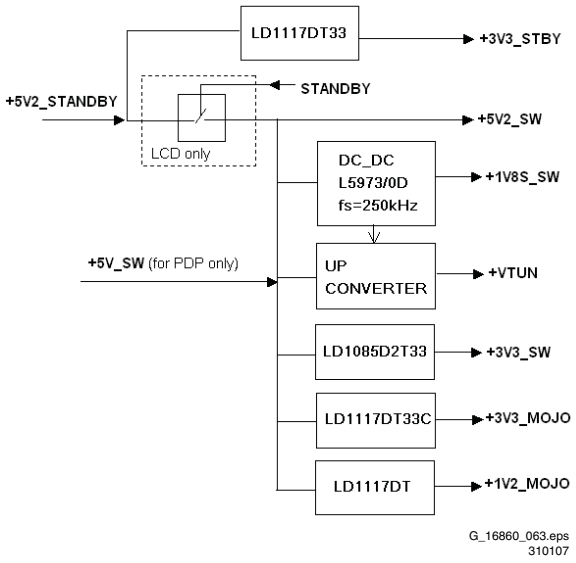


Figure 9-4 DC-DC converter block diagram

The +5 V switch, needed for the switch voltages, is for LCD sets physically mounted on the SSB, whereas for the PDP sets it is physically mounted on the PSU board.

9.4 Front-End

This chassis uses different tuners depending on the region. An overview of region-dependency can be found in table “Tuner diversity”.

Table 9-1 Tuner diversity

Region	Tuner	Type
Europe	TD1316AF	Hybrid
	UV1318S	analogue
AP	UV1316E	analogue
China	TEDE9	analogue
Latam	UV1338	analogue

For a general outline of tuner applications in this chassis see figure “Tuner IF diagram”.
In the LC7.1x chassis (analogue sets), the signal coming from the tuner is fed to the IF demodulator (through the SAW filters) and then passed to the Trident Video Processor.

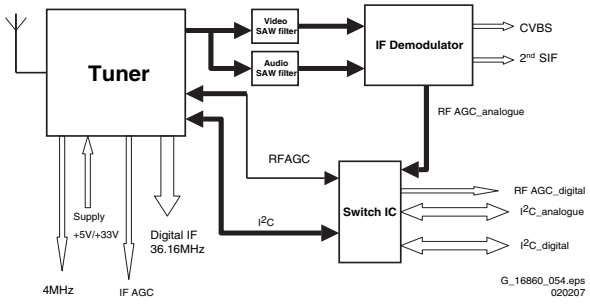


Figure 9-5 Tuner IF diagram

9.4.1 Video IF Amplifier

The IF-filter is integrated in a SAW (Surface Acoustic Wave) filter. One for filtering IF-video (item 1102) and one for IF-audio (item 1103). The type of these filters depends on the standard to be received (region-dependency). Some filters can be switched to another standard, what makes them suitable for applications in multi-standard platforms. An overview of the SAW filter diversity can be found in table “SAW filter diversity”.

Table 9-2 SAW filter diversity

SAW filter	Switching Y/N	Region	Video/Audio
OFWK3953M	No	Europe	Video
OFWK9656M	Yes	Europe	Audio
OFWK7265L	Yes	AP	Video
OFWK9361L	No	AP	Sound
OFWK3956L	No	China	Video
OFWK3955L	No	China	Video
OFWK9352L	No	China	Audio
OFWM1967L	No	LATAM	Video/Audio

Switching is done by the microcontroller via SAW_SW. In table “SAW filter switching” is explained how to address the different system standards.

Table 9-3 SAW filter switching

Region	SAW_SW	System
Europe	1	L’
	0	other systems
AP	1	B/G, D/K, I
	0	M/N
China	1	B/G, D/K, I
	0	M/N
LATAM	n.a.	M/N

The pin assignment of all analogue tuners is equal and can be found in table “Pin assignment analogue tuners”.

Table 9-4 Pin assignment analogue tuners

Pin number	Description	DC voltage (V)
1	RF AGC voltage	3.3 - 4.5 (weak or no signal) < 3.3 (strong signal)
2	n.c.	
3	I^2C-bus address select	0
4	SCL	0 to 3.3
5	SDA	0 to 3.3
6	n.c.	
7	supply voltage	5 ±0.25
8	n.c.	
9	tuning supply voltage	33
10	n.c.	
11	TV IF output	

9.4.2 Automatic Gain Control

In the LC7.1x chassis (analogue sets), the tuner receives an external AGC voltage, coming from the demodulator, to perform automatic gain control.

9.5 Video Processing

The video processing is completely handled by the Trident SVP CX32 video processor which features:
- CVBS-input for analogue signals.
- RGB-input for digital (DVB-T) signals (used in the LC7.2x chassis).
- Motion and “edge-adaptive” de-interlacing.
- Integrated ADC.
- Built-in 8-bit LVDS transmitter.
- Colour stretch.
- Skin colour enhancement.
- 3D Digital Comb Video Decoder.
- Interlaced and Progressive Scan refresh.
- TeleText decoding.
- OSD and VBI/Closed Caption.

9.5.1 Video Application

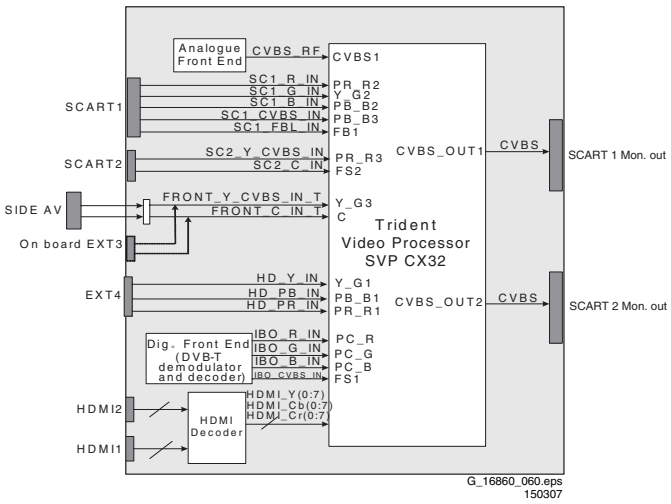


Figure 9-6 Block diagram video processing

"Block diagram video processing" shows the input and output signals to and from the Trident Video Processor in EU applications.

During analogue reception, a CVBS signal coming from the analogue front-end is fed to the video processor via pin CVBS1. During digital reception (applicable to LC7.2x chassis), the video signal coming from the MPEG decoder (MOJO) is fed to the video processor via pins FS1, PC_B, PC_G and PC_R.

The video processor also interfaces the SCART1 & 2 input, side AV, EXT4 (HD where applicable) and HDMI1 & 2 input. Through the SCART1 & 2 connectors, a monitor output is foreseen.

9.6 Memory addressing

Figure "Memory block diagram" shows the interconnection between the microprocessor, the FLASH memory, the Trident Video Processor and the SDRAM.

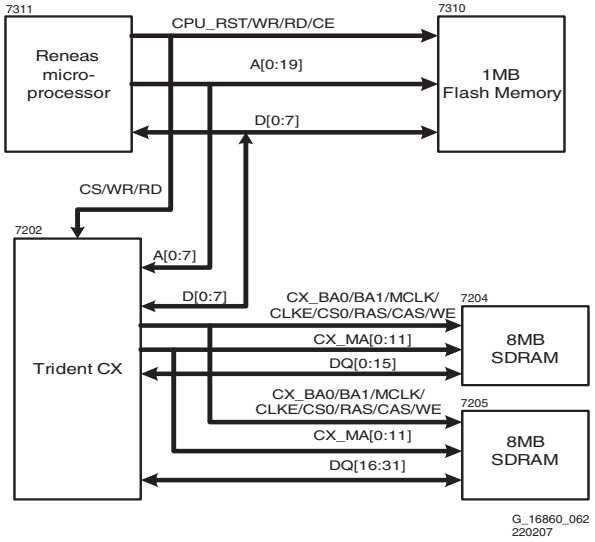


Figure 9-7 Memory block diagram

Control signals CPU_RST, WR, RD and CE, address lines A[0:19] and data lines D[0:7] are used for transferring data between the microprocessor (item 7311) and the flash memory (item 7310). Control signals CS, WR and RD, address lines A[0:7] and data lines D[0:7] are used for transferring data between the Trident Video Processor (item 7202) and the microprocessor (item 7311). Control signals CX_BA0, CX_BA1, CX_MCLK, CX_CLKE, CX_CS0, CX_RAS, CX_CAS and CX_WE, address lines CX_MA[0:11] and data lines DQ[0:15] are used for transferring data between the Trident Video Processor and the SDRAM ICs (items 7204 and 7205).

9.7 Audio Processing

The audio decoding is done entirely via the Multistandard Sound Processor (MSP) 4450P (item 7411).
This processor covers the processing of both analogue and (NICAM) digital input signals by processing the (analogue) IF signal-in to processed (analogue) AF-out (baseband audio). An internal 40 ms (stereo) audio delay line (LIP SYNC) is foreseen and therefore no external delay line is necessary.

All internal clock signals are derived from an external 18.432 MHz oscillator, which, in NICAM or I²S-mode, on its turn is locked to the corresponding source.

The following functionality is included:
- Automatic Standard Detection (ASD) automatically detects the actual broadcasted TV standard
- Automatic Sound Select (ASS) automatically switches (without any I²C-bus action) between mono/stereo/ bilingual mode when the broadcast mode changes.

9.7.1 Audio Application

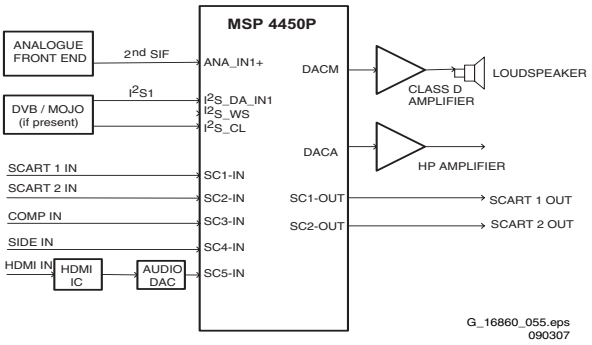


Figure 9-8 Block diagram audio processing - EU application

In EU applications, the MSP features:
- Sound IF input for signals coming from the analogue front-end
- Three I²S-inputs for signals (“DATA”, “CLK” and “WS”) coming from the MOJO in case of digital reception
- Five analogue inputs: for EXT1 to EXT4 and HDMI
- Loudspeaker output path
- Headphone output path
- SCART-1 output path (RF)
- SCART-2 output path (WYSIWYG = monitor).

Digital audio signals coming from HDMI sources are fed to a digital-to-analogue converter and then fed to the MSP.
In case of reception of digital TV signals, digital audio signals coming from the MOJO are directly fed to the MSP via the I2S_DA_IN1, I2S_WS1 and I2S_CL1 lines. This ensures a “true digital path”.

The microprocessor (item 7311) controls the audio part with the following control lines:
- MUTEn: used to mute the Class D amplifiers
- ANTI_PLOP: used to detect any DC failure in the Class D amplifiers
- DC_PROT: used to detect any DC failure in the Class D amplifiers.

9.7.2 Audio Amplifier

The audio amplifier is an integrated class-D amplifier (TDA8932T, item 7A01). It combines a good performance with a high efficiency, resulting in a big reduction in heat generation.

Principle

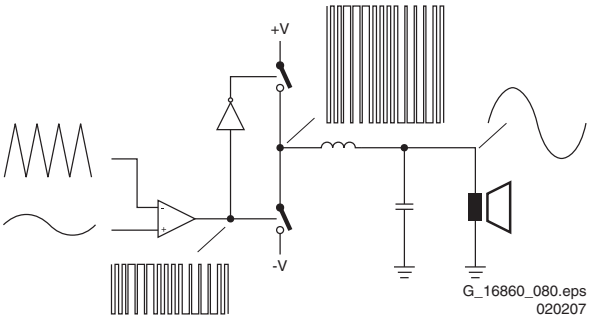


Figure 9-9 Principle Class-D Amplifier

The Class D amplifier works by varying the duty cycle of a Pulse Width Modulated (PWM) signal.
By comparing the input voltage to a triangle wave, the amplifier increases duty cycle to increase output voltage, and decreases duty cycle to decrease output voltage.
The output transistors of a Class D amplifier switch from 'full off' to 'full on' (saturated) and then back again, spending very little time in the linear region in between. Therefore, very little power is lost to heat. If the transistors have a low 'on' resistance (RDS(ON)), little voltage is dropped across them, further reducing losses.
A Low Pass Filter at the output passes only the average of the output wave, which is an amplified version of the input signal. In order to keep the distortion low, negative feedback is applied.

The **advantage** of Class D is increased efficiency (= less heat dissipation). Class D amplifiers can drive the same output power as a Class AB amplifier using less supply current.
The **disadvantag**e is the large output filter. The main reason for this filter is that the switching waveform results in maximum current flow. This causes more loss in the load, which causes lower efficiency. An LC filter with a cut-off frequency less than the Class D switching frequency, allows the switching current to flow through the filter instead of the load, thus reducing the overall loss and increasing the efficiency.

DC-protection
A DC-detection circuit is foreseen to protect the speakers. It is built around three transistors (items 7A05 to 7A07) and generates a protection signal (DC_PROT) to the microprocessor in case of a DC failure in the Class D amplifiers.

9.8 HDMI

9.8.1 Introduction

Note: Text below is an excerpt from the "HDMI Specification" that is issued by the HDMI founders (see *http://www.hdmi.org*).

The High-Definition Multimedia Interface is developed for transmitting digital signals from audiovisual sources to television sets, projectors and other video displays.
HDMI can carry high quality multi-channel audio data and can carry all standard and high-definition consumer electronics video formats. Content protection technology is available.
HDMI can also carry control and status information in both directions.

HDMI is backward compatible with DVI (1.0). Compared with DVI, HDMI offers extra:

- YUV 4:4:4 (3 x 8-bit) or 4:2:2 (up to 2 x 12-bit), where DVI offers only RGB 4:4:4 (3 x 8 bit).
- Digital audio in CD quality (16-bit, 32/44.1/48 kHz), higher quality available (8 channels, 192 kHz).
- Remote control via CEC bus (Consumer Electronics Control): allows user to control all HDMI devices with the TV's remote control and menus.
- Smaller connector (SCART successor).
- Less cables: e.g. from 10 audio/9 video cables to 3 HDMI cables.

9.8.2 Implementation

The IC used is the Sil 9025 (Silicon Image) third generation HDMI receiver (item 7817 on the SSB) with following features:

- Dual HDMI input connector.
- Two EEPROMS to support EDID.
- HDMI audio.
- I^2S output to DACs which operating freq. of 32 to 192 kHz.
- Integrated HDCP decryption engine.
- Built-in pre-programmed HDCP keys for copy protection.
- Colour space conversion RGB to YCbCr.
- "Hot Plug Reset" signal.

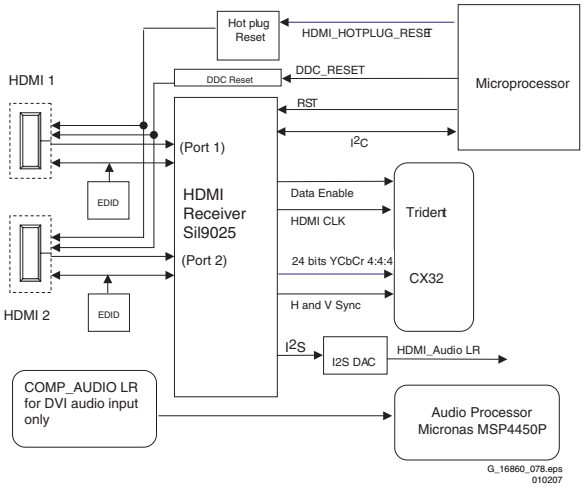


Figure 9-10 HDMI implementation

HDMI connectors 1 and 2 are connected to resp. ports 1 and 2 of the HDMI receiver. The ports cannot be activated at the same moment. Switching is controlled by software.
"Hot Plug Reset" and "DDC Reset" are controlled by the microprocessor.

The HDMI receiver will convert all RGB or YCbCr 4:2:2 signals to 24-bit YCbCr 4:4:4. When it receives a YCbCr 4:4:4 signal it will just pass the signal directly to the Trident Video Processor.

9.9 Abbreviation List

1080i	1080 visible lines, interlaced
1080p	1080 visible lines, progressive scan
2CS	2 Carrier Sound
2DNR	Spatial (2D) Noise Reduction
3DNR	Temporal (3D) Noise Reduction
480i	480 visible lines, interlaced
480p	480 visible lines, progressive scan
AARA	Automatic Aspect Ratio Adaptation: algorithm that adapts aspect ratio to remove horizontal black bars; keeping up the original aspect ratio
ACI	Automatic Channel Installation: algorithm that installs TV channels directly from a cable network by means of a predefined TXT page
ADC	analogue to Digital Converter
AFC	Automatic Frequency Control: control signal used to tune to the correct frequency
AGC	Automatic Gain Control: algorithm that controls the video input of the feature box
AM	Amplitude Modulation
AUO	Acer Unipack Optronics
AP	Asia Pacific
AR	Aspect Ratio: 4 by 3 or 16 by 9
ASD	Automatic Standard Detection
AV	Audio Video
B/G	Monochrome TV system. Sound carrier distance is 5.5 MHz
BTSC	Broadcast Television System Committee
CAM	Conditional Access Module
CBA	Circuit Board Assembly (or PWB)
CEC	Consumer Electronics Control bus; remote control bus on HDMI connections
CI	Common Interface; E.g PCMCIA slot for a CAM in a set top box
CL	Constant Level: audio output to connect with an external amplifier
CLUT	Colour Look Up Table
ComPair	Computer aided rePair
COFDM	Coded Orthogonal Frequency Division Multiplexing; A multiplexing technique that distributes the data to be transmitted over many carriers
CSM	Customer Service Mode
CVBS	Composite Video Blanking and Synchronisation
CVBS-MON	CVBS monitor signal
CVBS-TER-OUT	CVBS terrestrial out
CVI	Component Video Input
DAC	Digital to analogue Converter
DBE	Dynamic Bass Enhancement: extra low frequency amplification
DDC	Display Data Channel; is a part of the "Plug and Play" feature
DFU	Directions For Use: owner's manual
DNR	Dynamic Noise Reduction
DRAM	Dynamic RAM
DSP	Digital Signal Processing
DST	Dealer Service Tool: special (European) remote control designed for service technicians
DTS	Digital Theatre Sound
DVB(T)	Digital Video Broadcast; An MPEG2 based standard for transmitting digital audio and video. T= Terrestrial
DVD	Digital Versatile Disc
DVI	Digital Visual Interface
DW	Double Window

ED	Enhanced Definition: 480p, 576p
EDID	Extended Display Identification Data (VESA standard)
EEPROM	Electrically Erasable and Programmable Read Only Memory
EU	EUrope
EXT	EXTernal (source), entering the set by SCART or by cinches (jacks)
FBL	Fast Blanking: DC signal accompanying RGB signals
FBL-TXT	Fast Blanking Teletext
FLASH	FLASH memory
FM	Field Memory / Frequency Modulation
FMR	FM Radio
FRC	Frame Rate Converter
FTV	Flat TeleVision
H	H_sync to the module
HD	High Definition: 720p, 1080i, 1080p
HDCP	High-bandwidth Digital Content Protection; A "key" encoded into the HDMI/DVI signal that prevents video data piracy. If a source is HDCP coded and connected via HDMI/DVI without the proper HDCP decoding, the picture is put into a "snow vision" mode or changed to a low resolution. For normal content distribution, the source and the display device must be enabled for HDCP "software key" decoding
HDMI	High Definition Multimedia Interface, digital audio and video interface
HP	Head Phone
I	Monochrome TV system. Sound carrier distance is 6.0 MHz
I2C	Integrated IC bus
I2S	Integrated IC Sound bus
IBO(Z)	Intelligent Bolt On module. Z= Zapper; module for DVB reception.
IC	Integrated Circuit
IF	Intermediate Frequency
IR	Infra Red
IRQ	Interrupt ReQuest
Last Status	The settings last chosen by the customer and read and stored in RAM or in the NVM. They are called at start-up of the set to configure it according the customers wishes
LATAM	LATin AMerica
LC07	Philips chassis name for LCD TV 2007 project
LCD	Liquid Crystal Display
LED	Light Emitting Diode
L/L'	Monochrome TV system. Sound carrier distance is 6.5 MHz. L' is Band I, L is all bands except for Band I
LPL	LG Philips LCD
LS	Loud Speaker
LVDS	Low Voltage Differential Signalling, data transmission system for high speed and low EMI communication.
M/N	Monochrome TV system. Sound carrier distance is 4.5 MHz
MOSFET	Metal Oxide Semiconductor Field Effect Transistor
MPEG	Motion Pictures Experts Group
MSP	Multi-standard Sound Processor: ITT sound decoder
MUTE	MUTE Line
NAFTA	North American Free Trade Association: Trade agreement between Canada, USA and Mexico
NC	Not Connected
NICAM	Near Instantaneous Compounded Audio Multiplexing. This is a digital sound system, used mainly in Europe.
NTSC	National Television Standard Committee. Colour system used mainly in North America and Japan. Colour carrier NTSC M/N = 3.579545 MHz, NTSC 4.43 = 4.433619 MHz (this is a VCR norm, it is not transmitted off-air)
NVM	Non Volatile Memory: IC containing TV related data (for example, options)
O/C	Open Circuit
ON/OFF LED	On/Off control signal for the LED
OAD	Over the Air Download
OSD	On Screen Display
PAL	Phase Alternating Line. Colour system used mainly in Western Europe (colour carrier = 4.433619 MHz) and South America (colour carrier PAL M = 3.575612 MHz and PAL N = 3.582056 MHz)
PC	Personal Computer
PCB	Printed Circuit Board (or PWB)
PDP	Plasma Display Panel
PIG	Picture In Graphic
PIP	Picture In Picture
PLL	Phase Locked Loop. Used, for example, in FST tuning systems. The customer can directly provide the desired frequency
PSU	Power Supply Unit
PWB	Printed Wiring Board (or PCB)
RAM	Random Access Memory
RC	Remote Control transmitter
RC5 (6)	Remote Control system 5 (6), the signal from the remote control receiver
RF	Radio Frequency
RGB	Red, Green, and Blue. The primary colour signals for TV. By mixing levels of R, G, and B, all colours (Y/C) are reproduced.
RGBHV	Red, Green, Blue, Horizontal sync, and Vertical sync
ROM	Read Only Memory
SAM	Service Alignment Mode
SC	SandCastle: two-level pulse derived from sync signals
SC1-OUT	SCART output of the MSP audio IC
SC2-OUT	SCART output of the MSP audio IC
S/C	Short Circuit
SCL	Clock signal on I2C bus
SD	Standard Definition: 480i, 576i
SDA	Data signal on I2C bus
SDI	Samsung Display Industry
SDM	Service Default Mode
SDRAM	Synchronous DRAM
SECAM	SEequence Couleur Avec Memoire. Colour system used mainly in France and Eastern Europe. Colour carriers = 4.406250 MHz and 4.250000 MHz
SIF	Sound Intermediate Frequency
SMPS	Switch Mode Power Supply
SND	SouND
SOPS	Self Oscillating Power Supply
S/PDIF	Sony Philips Digital InterFace
SRAM	Static RAM
SSB	Small Signal Board
STBY	Stand-by
SVHS	Super Video Home System
SW	Sub Woofer / SoftWare / Switch
THD	Total Harmonic Distortion
TXT	TeleteXT
uP	Microprocessor

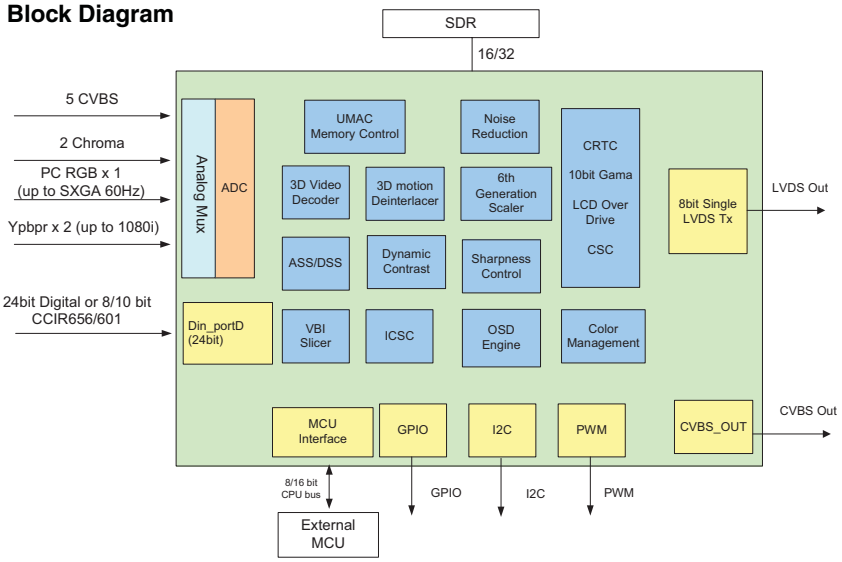
VL	Variable Level out: processed audio output toward external amplifier
VCR	Video Cassette Recorder
VGA	Video Graphics Array
WD	Watch Dog
WYSIWYR	What You See Is What You Record: record selection that follows main picture and sound
XTAL	Quartz crystal
YPbPr	Component video (Y= Luminance, Pb/Pr= Colour difference signals B-Y and R-Y, other amplitudes w.r.t. to YUV)
Y/C	Video related signals: Y consists of luminance signal, blanking level and sync; C consists of colour signal.
Y-OUT	Luminance-signal
YUV	Baseband component video (Y= Luminance, U/V= Colour difference signals)

9.10 IC Data Sheets

This section shows the internal block diagrams and pin layouts of ICs that are drawn as "black boxes" in the electrical diagrams (with the exception of "memory" and "logic" ICs).

9.10.1 Diagram B04B, Type SVP CX32 (IC7202), Trident Video processor

Block Diagram



Pin Configuration

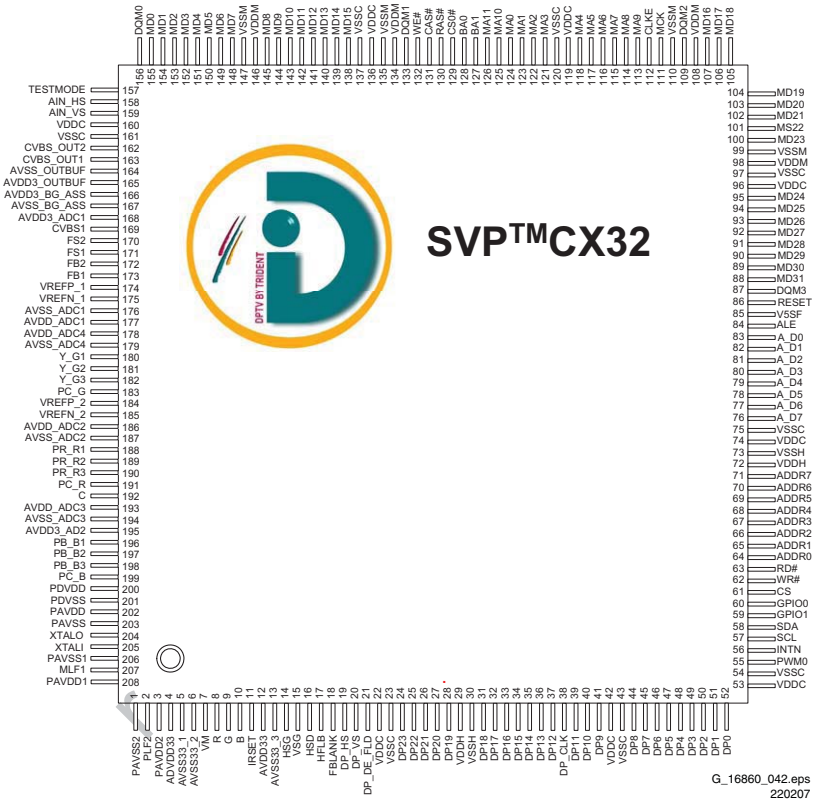


Figure 9-11 Internal block diagram and pin configuration

9.10.2 Diagram B04C, Type MSP4450P (IC7411), Micronas Sound Processor

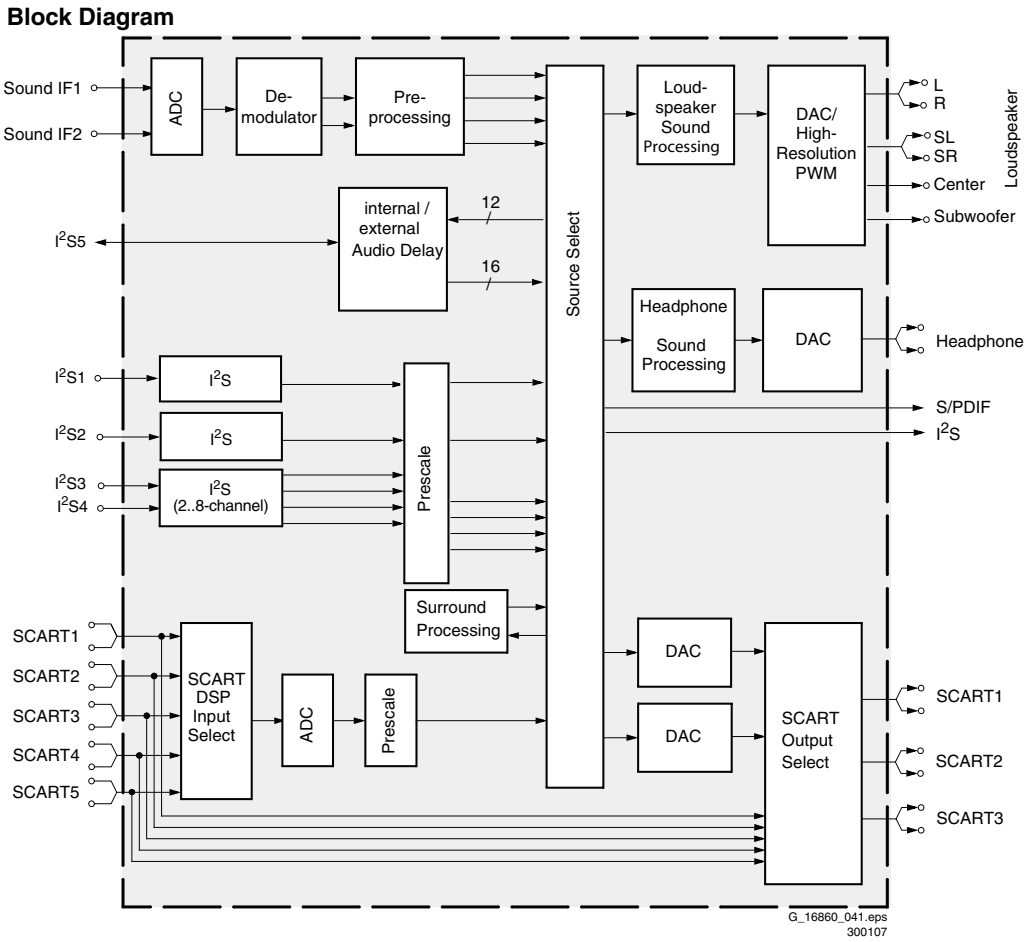
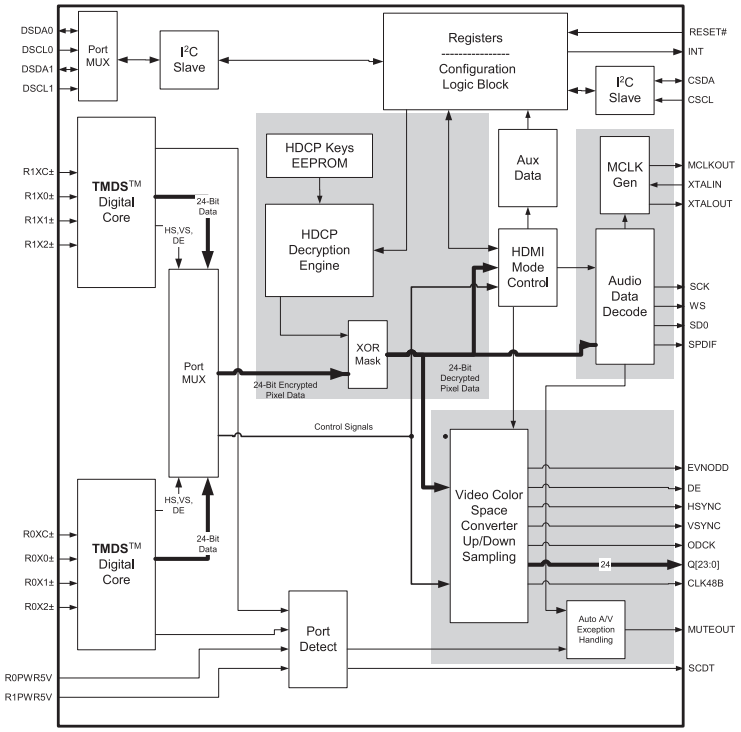


Figure 9-12 Internal block diagram

9.10.3 Diagram B06C, Type SIL9025CTU(IC7817), HDMI Receiver

Block Diagram



Pin Configuration

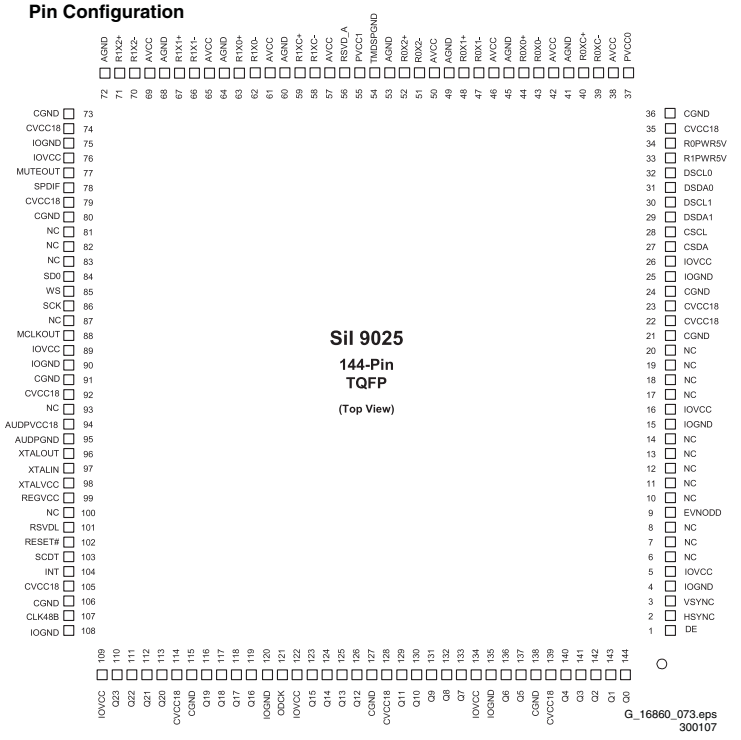
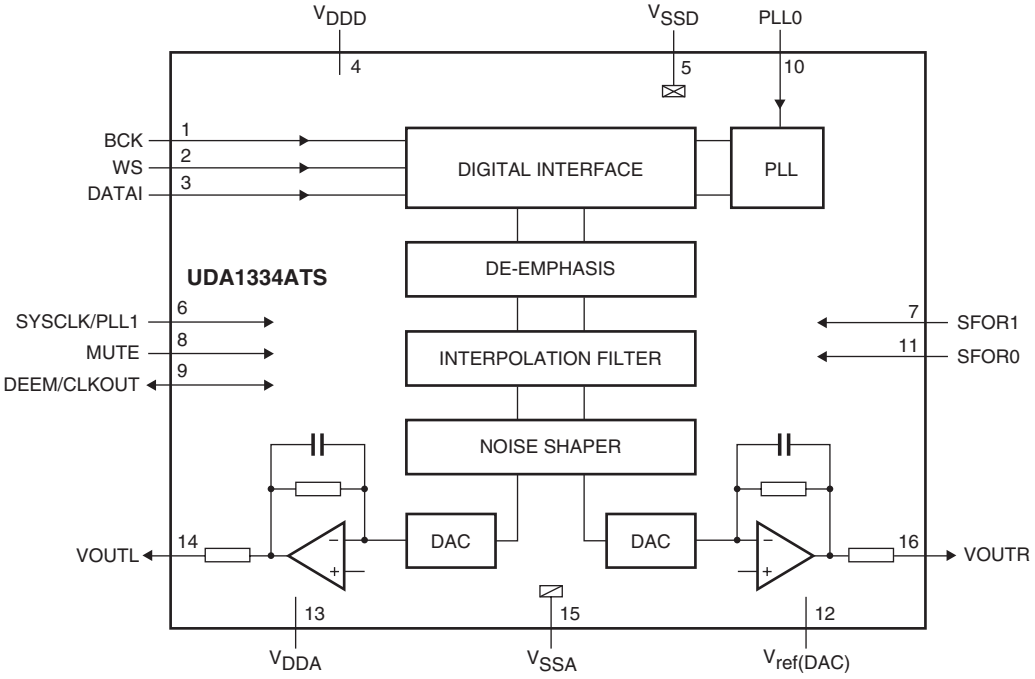


Figure 9-13 Internal block diagram and pin configuration

9.10.4 Diagram B06C, Type UDA1334ATS (IC7810), Audio DAC

Block Diagram



Pin Configuration

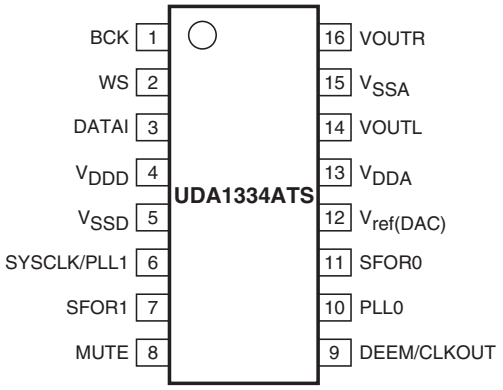


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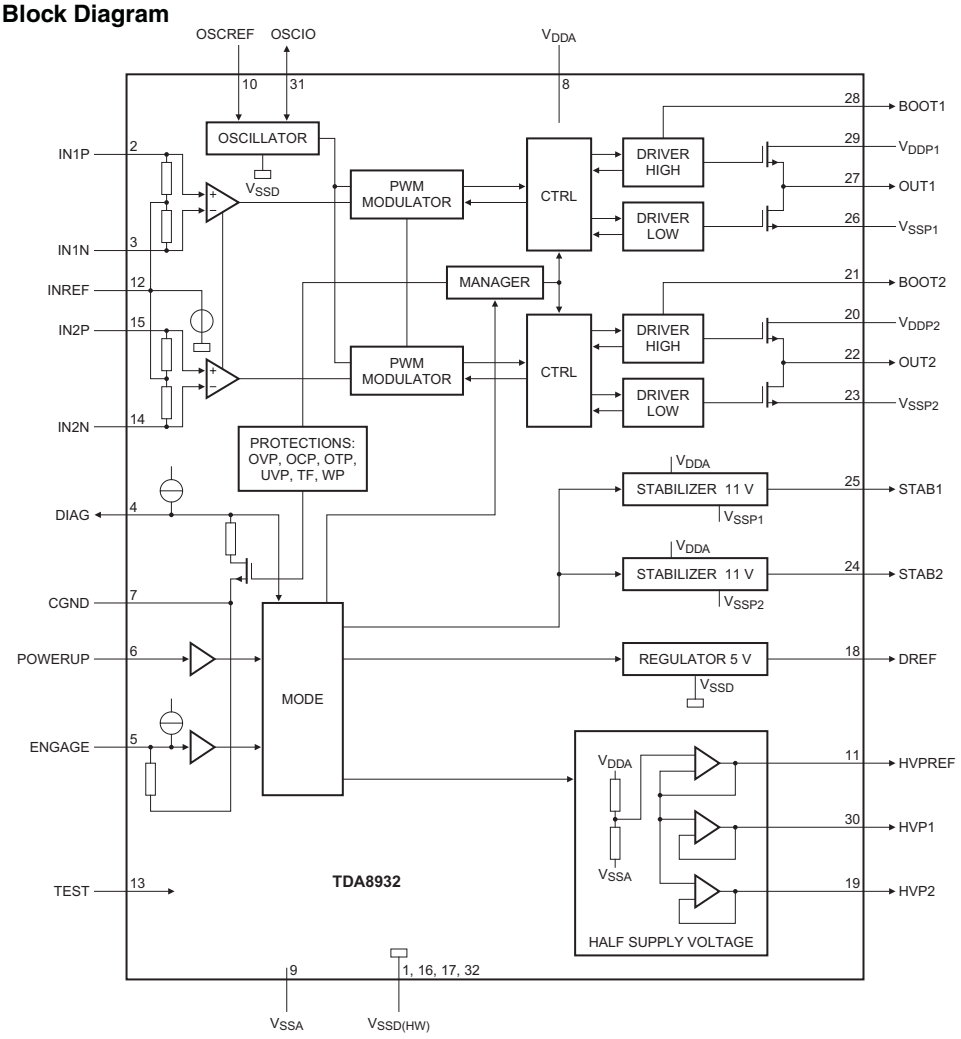
Figure 9-14 Internal block diagram and pin configuration

9.10.5 Diagram B07, Type TDA8932T (IC7A01), Audio Amplifier

Block Diagram



Pin Configuration

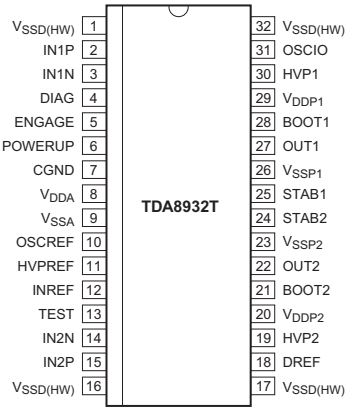


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Figure 9-15 Internal block diagram and pin configuration

10. Spare Parts List

Set Level per Model Number (CTN)

42PFP5332/10

0815	Proc. main SW	Download from website
0816	Proc. NVM SW	Download from website
0821	HDMI-1 SW	Download from website
0822	HDMI-2 SW	Download from website
1004⚠	9322 246 76682	PDP PP42AX021A
1062	2422 549 00148	Socket 3p m
1112	3139 268 05931	IR/LED Assy [J]
1114	3139 268 05921	Keyboard Assy [E]
1116	3139 268 09561	Side IO Assy [D]
8304	3139 131 09291	Cable11p/820/11p f
8321	3104 311 08731	Cable Posi/100/posi
8735	3139 131 08731	Cable 4p/480 1200/2ft
8C01	3139 131 09321	Cable 9p/280/9p
8G51	3139 131 09251	Cable 30p/280/31p
8M01	3104 311 12721	Cable p/120/3p Wh
8M20	3139 131 08762	Cable 7p/680/7p
8P11	3139 131 09341	Cable 8p/280/8p

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5213	2422 264 00612	Loudsp. 12Ω 15W FR
5215	2422 264 00606	Loudsp. 12Ω 15W Tw

42PFP5332/12

0815	Proc. main SW	Download from website
0816	Proc. NVM SW	Download from website
0821	HDMI-1 SW	Download from website
0822	HDMI-2 SW	Download from website
1004⚠	9322 246 76682	PDP PP42AX021A
1062	2422 549 00148	Socket 3p m
1112	3139 268 05931	IR/LED Assy [J]
1114	3139 268 05921	Keyboard Assy [E]
1116	3139 268 09561	Side IO Assy [D]
8304	3139 131 09291	Cable11p/820/11p f
8321	3104 311 08731	Cable Posi/100/posi
8735	3139 131 08731	Cable 4p/480 1200/2ft
8C01	3139 131 09321	Cable 9p/280/9p
8G51	3139 131 09251	Cable 30p/280/31p
8M01	3104 311 12721	Cable p/120/3p Wh
8M20	3139 131 08762	Cable 7p/680/7p
8P11	3139 131 09341	Cable 8p/280/8p

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5213	2422 264 00612	Loudsp. 12Ω 15W FR
5215	2422 264 00606	Loudsp. 12Ω 15W Tw

Small Signal Board [B]

Various

1101	3139 147 19801	Tuner UV1318S/A IH -3
1102	9322 042 72682	SAW 38.9MHz K3953M
1103	2422 549 44341	SAW 38.9MHz K9656M
1104	2422 543 01386	Xtal 4MHz 20p
1201	2422 543 01133	Xtal 14.32MHz 20pF
1210	2422 549 45325	Bead 67Ω at 100MHz
1211	2422 549 45325	Bead 67Ω at 100MHz
1212	2422 549 45325	Bead 67Ω at 100MHz
1213	2422 549 45325	Bead 67Ω at 100MHz
1214	2422 549 45325	Bead 67Ω at 100MHz
1215	2422 549 45325	Bead 67Ω at 100MHz
1216	2422 549 45325	Bead 67Ω at 100MHz
1301	2422 543 01526	Xtal 10MHz 12p NX8045
1304	2422 025 10655	Connector 11p m
1314	2422 025 18749	Connector 3p m
1411	2422 543 01461	Xtal 18.432MHz 12p
1504	4822 265 11338	21p (SCART)
1506	4822 265 11338	21p (SCART)
1615	2422 026 05894	Socket CINCH
1735	2422 025 09406	Connector 4p m
1810	2422 033 00617	Socket HDMI
1811	2422 033 00617	Socket HDMI
1823	2422 543 01517	Xtal 28M322 18p NX5032
1C01	2422 025 10769	Connector 9p m
1G51	2422 025 18772	Connector 30p m
1M20	4822 267 10618	Connector 7p
1P11	4822 265 11352	Connector 8p

⊣⊢

2112	2020 552 00343	22µF 10% 16V
2117	5322 126 11583	10nF 10% 50V 0603
2118	5322 126 11583	10nF 10% 50V 0603
2119	2020 552 96863	100nF 50V 0603
2120	2020 552 00343	22µF 10% 16V
2121	3198 016 31590	15pF 10% 50V 0603
2122	3198 016 31590	15pF 10% 50V 0603
2123	4822 126 14247	1.5nF 50V 0603
2125	3198 017 44740	470nF 10V 0603
2126	3198 017 42240	220nF 16V Y5V 0603
2127	4822 122 33761	22pF 5% 50V
2128	5322 126 11583	10nF 10% 50V 0603
2129	2020 552 00343	22µF 10% 16V
2130	5322 126 11583	10nF 10% 50V 0603
2131	2020 552 00343	22µF 10% 16V
2132	2020 552 00343	22µF 10% 16V
2133	5322 126 11583	10nF 10% 50V 0603
2136	3198 017 44740	470nF 10V 0603
2137	5322 126 11583	10nF 10% 50V 0603
2138	5322 126 11583	10nF 10% 50V 0603
2139	4822 126 14315	390pF 5% 50V 0603
2143	5322 126 11578	1nF 10% 50V 0603
2144	5322 126 11583	10nF 10% 50V 0603
2145	5322 126 11578	1nF 10% 50V 0603
2147	2238 786 19856	330nF 20% 160V 0603
2148	2238 586 59812	100nF 20% 50V 0603
2149	2020 552 00132	2.2µF 10% 10V
2151	3198 030 81090	10µF 20% 50V
2211	2020 552 00291	10µF 20% 6V3 0603
2212	2238 586 59812	100nF 20% 50V 0603
2213	2238 586 59812	100nF 20% 50V 0603
2214	2238 586 59812	100nF 20% 50V 0603
2215	2238 586 59812	100nF 20% 50V 0603
2216	2020 552 00291	10µF 20% 6V3 0603
2217	2238 586 59812	100nF 20% 50V 0603
2218	2238 586 59812	100nF 20% 50V 0603
2219	2238 586 59812	100nF 20% 50V 0603
2220	2238 586 59812	100nF 20% 50V 0603
2221	2238 586 59812	100nF 20% 50V 0603
2222	2238 586 59812	100nF 20% 50V 0603
2223	2238 586 59812	100nF 20% 50V 0603
2224	2238 586 59812	100nF 20% 50V 0603
2225	2238 586 59812	100nF 20% 50V 0603
2226	2238 586 59812	100nF 20% 50V 0603
2227	2238 586 59812	100nF 20% 50V 0603
2228	2238 586 59812	100nF 20% 50V 0603
2229	2020 552 00134	22µF 20% 6.3V 0805
2230	2020 552 00291	10µF 20% 6V3 0603
2231	2238 586 59812	100nF 20% 50V 0603
2232	2238 586 59812	100nF 20% 50V 0603
2233	2238 586 59812	100nF 20% 50V 0603
2234	2238 586 59812	100nF 20% 50V 0603
2235	2238 586 59812	100nF 20% 50V 0603
2236	2020 552 00291	10µF 20% 6V3 0603
2237	2238 586 59812	100nF 20% 50V 0603
2238	2238 586 59812	100nF 20% 50V 0603
2239	2238 586 59812	100nF 20% 50V 0603
2240	2238 586 59812	100nF 20% 50V 0603
2241	2238 586 59812	100nF 20% 50V 0603
2242	2238 586 59812	100nF 20% 50V 0603
2243	2238 586 59812	100nF 20% 50V 0603
2244	2238 586 59812	100nF 20% 50V 0603
2245	2238 586 59812	100nF 20% 50V 0603
2246	2020 552 96749	20pF 5% 50V 0603
2247	2020 552 96749	20pF 5% 50V 0603
2250	2238 586 59812	100nF 20% 50V 0603
2251	2238 586 59812	100nF 20% 50V 0603
2252	2238 586 59812	100nF 20% 50V 0603
2253	2238 586 59812	100nF 20% 50V 0603
2254	2238 586 59812	100nF 20% 50V 0603
2255	2238 586 59812	100nF 20% 50V 0603
2256	2238 586 59812	100nF 20% 50V 0603
2257	2238 586 59812	100nF 20% 50V 0603
2258	2238 586 59812	100nF 20% 50V 0603
2259	2238 586 59812	100nF 20% 50V 0603
2260	2238 586 59812	100nF 20% 50V 0603
2261	2238 586 59812	100nF 20% 50V 0603
2266	2238 586 59812	100nF 20% 50V 0603
2267	2238 586 59812	100nF 20% 50V 0603
2268	2238 586 59812	100nF 20% 50V 0603
2269	2238 586 59812	100nF 20% 50V 0603
2270	2238 586 59812	100nF 20% 50V 0603
2271	2238 586 59812	100nF 20% 50V 0603
2272	2238 586 59812	100nF 20% 50V 0603
2273	2238 586 59812	100nF 20% 50V 0603
2274	2238 586 59812	100nF 20% 50V 0603
2275	2238 586 15628	2.7nF 10% 50V 0603
2276	2238 586 15628	2.7nF 10% 50V 0603
2277	2238 586 59812	100nF 20% 50V 0603
2279	2020 552 00291	10µF 20% 6V3 0603
2280	2020 552 00291	10µF 20% 6V3 0603
2282	2020 552 00291	10µF 20% 6V3 0603
2284	2020 552 00291	10µF 20% 6V3 0603
2286	2020 552 00291	10µF 20% 6V3 0603
2287	2020 552 00291	10µF 20% 6V3 0603
2288	2020 552 00291	10µF 20% 6V3 0603
2289	2020 552 00291	10µF 20% 6V3 0603
2290	2020 552 00291	10µF 20% 6V3 0603
2291	2020 552 00291	10µF 20% 6V3 0603
2292	2020 552 00291	10µF 20% 6V3 0603
2293	2020 552 00291	10µF 20% 6V3 0603
2295	2238 586 59812	100nF 20% 50V 0603
2296	2238 586 59812	100nF 20% 50V 0603
2297	2020 552 00134	22µF 20% 6.3V 0805
2298	2238 586 59812	100nF 20% 50V 0603
2310	2238 586 59812	100nF 20% 50V 0603
2311	2020 552 00291	10µF 20% 6V3 0603
2312	2238 586 59812	100nF 20% 50V 0603
2313	2238 586 59812	100nF 20% 50V 0603
2314	3198 016 31590	15pF 10% 50V 0603
2315	2238 586 59812	100nF 20% 50V 0603
2316	3198 016 31590	15pF 10% 50V 0603
2317	2238 586 59812	100nF 20% 50V 0603
2318	2238 586 59812	100nF 20% 50V 0603
2320	2238 586 59812	100nF 20% 50V 0603
2323	2238 586 59812	100nF 20% 50V 0603
2327	5322 126 11583	10nF 10% 50V 0603
2329	5322 126 11578	1nF 10% 50V 0603
2330	5322 126 11578	1nF 10% 50V 0603
2331	5322 126 11578	1nF 10% 50V 0603
2332	5322 126 11578	1nF 10% 50V 0603
2333	5322 126 11578	1nF 10% 50V 0603
2335	5322 126 11578	1nF 10% 50V 0603
2336	5322 126 11578	1nF 10% 50V 0603
2337	5322 126 11578	1nF 10% 50V 0603
2338	4822 126 13879	220nF +80-20% 16V
2408	4822 126 13881	470pF 5% 50V
2409	4822 126 14247	1.5nF 50V 0603
2410	4822 124 23002	10µF 16V
2411	2020 552 00291	10µF 20% 6V3 0603
2412	4822 126 13883	220pF 5% 50V
2413	4822 126 13883	220pF 5% 50V
2414	2020 552 00291	10µF 20% 6V3 0603
2415	3198 016 33380	3.3pF 50V 0603
2416	3198 016 33380	3.3pF 50V 0603
2417	4822 126 14241	330pF 0603 50V
2418	4822 126 14241	330pF 0603 50V
2419	2238 586 59812	100nF 20% 50V 0603
2420	4822 124 23002	10µF 16V
2421	4822 126 14241	330pF 0603 50V
2422	4822 126 14241	330pF 0603 50V
2423	4822 124 23002	10µF 16V
2424	2020 552 00291	10µF 20% 6V3 0603
2425	2020 552 00291	10µF 20% 6V3 0603
2426	2020 552 00291	10µF 20% 6V3 0603
2427	2020 552 00291	10µF 20% 6V3 0603
2428	2020 552 94427	100pF 5% 50V
2429	2020 552 94427	100pF 5% 50V
2430	2020 552 94427	100pF 5% 50V
2431	2020 552 94427	100pF 5% 50V
2432	4822 126 14225	56pF 5% 50V 0603
2433	4822 126 14241	330pF 0603 50V
2434	4822 126 14241	330pF 0603 50V
2435	4822 126 14241	330pF 0603 50V
2436	2020 552 00291	10µF 20% 6V3 0603
2437	2020 552 00291	10µF 20% 6V3 0603
2438	2238 586 59812	100nF 20% 50V 0603
2439	2020 552 00247	470nF 10% 25V
2440	2020 552 00247	470nF 10% 25V
2441	4822 126 14247	1.5nF 50V 0603
2442	4822 126 13881	470pF 5% 50V
2443	4822 126 14247	1.5nF 50V 0603
2444	4822 126 13881	470pF 5% 50V
2445	2238 586 59812	100nF 20% 50V 0603
2502	4822 126 14241	330pF 0603 50V
2506	4822 126 14241	330pF 0603 50V
2508	4822 126 14241	330pF 0603 50V
2509	4822 126 13879	220nF +80-20% 16V
2512	5322 126 11579	3.3nF 10% 63V
2514	4822 126 14241	330pF 0603 50V
2515	4822 126 13879	220nF +80-20% 16V
2517	5322 126 11579	3.3nF 10% 63V
2518	4822 126 13879	220nF +80-20% 16V
2520	5322 126 11579	3.3nF 10% 63V
2521	4822 126 13879	220nF +80-20% 16V

2523	5322 126 11579	3.3nF 10% 63V
2525	4822 126 13879	220nF +80-20% 16V
2533	4822 126 13879	220nF +80-20% 16V
2534	4822 126 13879	220nF +80-20% 16V
2536	4822 126 13879	220nF +80-20% 16V
2607	4822 126 13879	220nF +80-20% 16V
2608	5322 126 11579	3.3nF 10% 63V
2610	4822 126 13879	220nF +80-20% 16V
2612	5322 126 11579	3.3nF 10% 63V
2801	4822 124 11131	47µF 6.3V
2802	2238 586 59812	100nF 20% 50V 0603
2803	2238 586 59812	100nF 20% 50V 0603
2804	2238 586 59812	100nF 20% 50V 0603
2805	4822 124 11131	47µF 6.3V
2806	2238 586 59812	100nF 20% 50V 0603
2807	2238 586 59812	100nF 20% 50V 0603
2808	4822 124 11131	47µF 6.3V
2809	5322 126 11583	10nF 10% 50V 0603
2810	5322 126 11583	10nF 10% 50V 0603
2811	2020 552 00291	10µF 20% 6V3 0603
2812	2020 552 00291	10µF 20% 6V3 0603
2813	4822 126 14507	18pF 5% 50V 0603
2814	5322 126 11583	10nF 10% 50V 0603
2815	5322 126 11583	10nF 10% 50V 0603
2816	5322 126 11578	1nF 10% 50V 0603
2817	2238 586 59812	100nF 20% 50V 0603
2818	2238 586 59812	100nF 20% 50V 0603
2819	2238 586 59812	100nF 20% 50V 0603
2828	4822 126 14507	18pF 5% 50V 0603
2829	2238 586 59812	100nF 20% 50V 0603
2830	2238 586 59812	100nF 20% 50V 0603
2833	2238 586 59812	100nF 20% 50V 0603
2835	2238 586 59812	100nF 20% 50V 0603
2836	2238 586 59812	100nF 20% 50V 0603
2838	2238 586 59812	100nF 20% 50V 0603
2839	2238 586 59812	100nF 20% 50V 0603
2840	2238 586 59812	100nF 20% 50V 0603
2843	2238 586 59812	100nF 20% 50V 0603
2844	2238 586 59812	100nF 20% 50V 0603
2845	2238 586 59812	100nF 20% 50V 0603
2847	5322 126 11578	1nF 10% 50V 0603
2848	5322 126 11578	1nF 10% 50V 0603
2849	5322 126 11578	1nF 10% 50V 0603
2850	5322 126 11578	1nF 10% 50V 0603
2851	5322 126 11578	1nF 10% 50V 0603
2852	5322 126 11578	1nF 10% 50V 0603
2853	5322 126 11578	1nF 10% 50V 0603
2854	5322 126 11578	1nF 10% 50V 0603
2855	3198 016 31020	1nF 25V 0603
2856	5322 126 11578	1nF 10% 50V 0603
2857	5322 126 11578	1nF 10% 50V 0603
2858	5322 126 11578	1nF 10% 50V 0603
2859	5322 126 11578	1nF 10% 50V 0603
2860	5322 126 11578	1nF 10% 50V 0603
2861	5322 126 11578	1nF 10% 50V 0603
2865	3198 016 31020	1nF 25V 0603
2866	5322 126 11578	1nF 10% 50V 0603
2867	5322 126 11578	1nF 10% 50V 0603
2868	5322 126 11578	1nF 10% 50V 0603
2869	5322 126 11578	1nF 10% 50V 0603
2870	5322 126 11578	1nF 10% 50V 0603
2871	5322 126 11578	1nF 10% 50V 0603
2872	5322 126 11578	1nF 10% 50V 0603
2873	5322 126 11578	1nF 10% 50V 0603
2874	3198 016 31020	1nF 25V 0603
2875	5322 126 11578	1nF 10% 50V 0603
2876	5322 126 11578	1nF 10% 50V 0603
2901	2020 552 96664	33pF 50V 0603
2902	3198 017 44740	470nF 10V 0603
2903	4822 124 12095	100µF 20% 16V
2904	3198 017 44740	470nF 10V 0603
2905	2020 552 96664	33pF 50V 0603
2906	4822 124 12095	100µF 20% 16V
2907	3198 017 44740	470nF 10V 0603
2908	4822 126 13879	220nF +80-20% 16V
2913	4822 126 13879	220nF +80-20% 16V
2940	4822 124 11131	47µF 6.3V
2A01	2238 586 59812	100nF 20% 50V 0603
2A02	2238 586 59812	100nF 20% 50V 0603
2A04	2020 021 00215	220µF 20% 25V
2A08	2020 021 00215	220µF 20% 25V
2A09	2238 586 59812	100nF 20% 50V 0603
2A10	2238 586 59812	100nF 20% 50V 0603
2A11	2020 552 96807	1µF 10% 10V 0603
2A12	4822 126 13883	220pF 5% 50V
2A13	3198 017 42240	220nF 16V Y5V 0603
2A14	2020 552 00247	470nF 10% 25V
2A15	2020 552 96807	1µF 10% 10V 0603
2A16	2020 552 96807	1µF 10% 10V 0603
2A17	3198 016 31020	1nF 25V 0603
2A18	3198 016 31020	1nF 25V 0603
2A19	4822 126 13883	220pF 5% 50V
2A20	2020 552 96807	1µF 10% 10V 0603
2A21	3198 016 31020	1nF 25V 0603
2A22	2238 586 59812	100nF 20% 50V 0603
2A23	3198 016 31020	1nF 25V 0603
2A24	2238 586 59812	100nF 20% 50V 0603
2A25	3198 017 31530	15nF 20% 50V 0603
2A26	3198 017 42240	220nF 16V Y5V 0603
2A27	3198 017 31530	15nF 20% 50V 0603
2A28	2020 552 00247	470nF 10% 25V
2A29	2238 586 59812	100nF 20% 50V 0603
2A30	2238 586 59812	100nF 20% 50V 0603
2A31	3198 016 31020	1nF 25V 0603
2A32	3198 016 31020	1nF 25V 0603
2A33	2238 586 59812	100nF 20% 50V 0603
2A34	2238 586 59812	100nF 20% 50V 0603
2A35	3198 016 31020	1nF 25V 0603
2A36	3198 016 31020	1nF 25V 0603
2A37	3198 017 42240	220nF 16V Y5V 0603
2A38	3198 017 42240	220nF 16V Y5V 0603
2A40	2020 552 00247	470nF 10% 25V
2A41	2020 552 96807	1µF 10% 10V 0603
2A45	3198 016 31020	1nF 25V 0603
2A46	3198 024 44730	47nF 50V 0603
2A47	3198 024 44730	47nF 50V 0603
2B10	4822 124 12095	100µF 20% 16V
2B11	5322 126 11583	10nF 10% 50V 0603
2B12	2020 552 00343	22µF 10% 16V
2B13	2022 031 00373	470µF 20% 16V
2B14	4822 126 13883	220pF 5% 50V
2B15	2238 916 15641	22nF 10% 25V 0603
2B17	2238 586 59812	100nF 20% 50V 0603
2B18	4822 124 23002	10µF 16V
2B19	2022 031 00308	22µF 20% 35V
2B20	2020 552 94427	100pF 5% 50V
2B21	4822 124 23002	10µF 16V
2B24	2020 012 93822	47µF 20% 16V
2B25	2238 586 59812	100nF 20% 50V 0603
2C55	5322 126 11578	1nF 10% 50V 0603
2C56	5322 126 11578	1nF 10% 50V 0603
2C57	5322 126 11578	1nF 10% 50V 0603
2L24	4822 126 13879	220nF +80-20% 16V
2L25	4822 126 13879	220nF +80-20% 16V

⊣WW⊢

3110	3198 021 38220	8.2kΩ 5% 0.062W 0603
3111	4822 051 30562	5.6kΩ 5% 0.063W 0603
3115	4822 051 30393	39kΩ 5% 0.062W
3116	4822 051 30682	6.8Ω 5% 0.062W
3117	4822 051 30222	2.2kΩ 5% 0.062W
3118	4822 051 30222	2.2kΩ 5% 0.062W
3119	4822 051 30223	22kΩ 5% 0.062W
3120	2422 549 42896	Bead 120Ω 100MHz
3121	2422 549 42896	Bead 120Ω 100MHz
3122	4822 051 30183	18kΩ 5% 0.062W
3123	4822 051 30151	150Ω 5% 0.062W
3124	4822 051 30101	100Ω 5% 0.062W
3125	4822 051 30151	150Ω 5% 0.062W
3126	4822 051 30181	180Ω 5% 0.062W
3127	4822 051 30562	5.6kΩ 5% 0.063W 0603
3128	4822 051 30101	100Ω 5% 0.062W
3129	4822 051 30101	100Ω 5% 0.062W
3130	4822 051 30102	1kΩ 5% 0.062W
3133	4822 117 11151	1Ω 5%
3134	4822 117 11151	1Ω 5%
3135	4822 117 12971	15Ω 5% 0603 0.62W
3136	2322 762 60479	47Ω 5% 2512
3137	2322 762 60479	47Ω 5% 2512
3201	3198 031 11010	4 x 100Ω 5% 1206
3202	3198 031 11010	4 x 100Ω 5% 1206
3203	4822 117 13523	220Ω 5% 0.63W
3204	4822 117 13523	220Ω 5% 0.63W
3211	4822 051 30102	1kΩ 5% 0.062W
3212	4822 051 30101	100Ω 5% 0.062W
3215	4822 051 30101	100Ω 5% 0.062W
3221	4822 051 30472	4.7Ω 5% 0.062W
3222	4822 051 30472	4.7Ω 5% 0.062W
3227	4822 051 30101	100Ω 5% 0.062W
3233	4822 051 30101	100Ω 5% 0.062W
3235	4822 051 30101	100Ω 5% 0.062W
3238	4822 051 30101	100Ω 5% 0.062W
3239	4822 051 30101	100Ω 5% 0.062W
3244	3198 021 32290	22Ω 5% 0603
3248	3198 021 32290	22Ω 5% 0603
3260	2350 035 10229	4 x 22Ω 5% 1206
3261	2350 035 10229	4 x 22Ω 5% 1206
3262	2350 035 10229	4 x 22Ω 5% 1206
3263	2350 035 10229	4 x 22Ω 5% 1206
3264	2350 035 10229	4 x 22Ω 5% 1206
3265	2350 035 10229	4 x 22Ω 5% 1206
3266	3198 021 32290	22Ω 5% 0603
3267	3198 021 32290	22Ω 5% 0603
3268	2350 035 10229	4 x 22Ω 5% 1206
3271	2350 035 10229	4 x 22Ω 5% 1206
3300	4822 117 11817	1.2kΩ 1% 0.0625W
3303	4822 051 30101	100Ω 5% 0.062W
3305	4822 051 30332	3.3Ω 5% 0.062W
3308	4822 051 30332	3.3Ω 5% 0.062W
3310	4822 051 30102	1kΩ 5% 0.062W
3313	4822 051 30331	330Ω 5% 0.062W
3314	4822 051 30103	10kΩ 5% 0.062W
3315	4822 051 30101	100Ω 5% 0.062W
3316	4822 051 30103	10kΩ 5% 0.062W
3318	4822 051 30101	100Ω 5% 0.062W
3319	4822 051 30103	10kΩ 5% 0.062W
3320	4822 051 30101	100Ω 5% 0.062W
3322	4822 051 30101	100Ω 5% 0.062W
3323	4822 051 30101	100Ω 5% 0.062W
3324	4822 051 30331	330Ω 5% 0.062W
3325	4822 051 30103	10kΩ 5% 0.062W
3329	4822 051 30101	100Ω 5% 0.062W
3336	4822 051 30101	100Ω 5% 0.062W
3338	4822 051 30101	100Ω 5% 0.062W
3339	4822 051 30101	100Ω 5% 0.062W
3340	4822 051 30101	100Ω 5% 0.062W
3341	4822 051 30101	100Ω 5% 0.062W
3342	4822 051 30101	100Ω 5% 0.062W
3343	4822 051 30101	100Ω 5% 0.062W
3345	4822 051 30101	100Ω 5% 0.062W
3346	4822 051 30101	100Ω 5% 0.062W
3347	4822 051 30103	10kΩ 5% 0.062W
3348	4822 051 30479	47Ω 5% 0.062W
3349	4822 051 30103	10kΩ 5% 0.062W
3350	4822 051 30103	10kΩ 5% 0.062W
3351	4822 051 30332	3.3Ω 5% 0.062W
3352	4822 051 30332	3.3Ω 5% 0.062W
3353	4822 051 30103	10kΩ 5% 0.062W
3354	4822 051 30101	100Ω 5% 0.062W
3355	4822 051 30101	100Ω 5% 0.062W
3356	4822 051 30101	100Ω 5% 0.062W
3357	4822 051 30101	100Ω 5% 0.062W
3361	4822 051 30101	100Ω 5% 0.062W
3364	4822 051 30101	100Ω 5% 0.062W
3365	4822 051 30101	100Ω 5% 0.062W
3366	4822 051 30103	10kΩ 5% 0.062W
3368	4822 051 30101	100Ω 5% 0.062W
3370	4822 051 30101	100Ω 5% 0.062W
3372	4822 051 30472	4.7Ω 5% 0.062W
3373	4822 051 30101	100Ω 5% 0.062W
3375	4822 051 30472	4.7Ω 5% 0.062W
3377	4822 051 30332	3.3Ω 5% 0.062W
3378	4822 051 30101	100Ω 5% 0.062W
3379	4822 051 30332	3.3Ω 5% 0.062W
3380	4822 051 30101	100Ω 5% 0.062W
3381	3198 021 32290	22Ω 5% 0603
3382	4822 051 30101	100Ω 5% 0.062W
3383	4822 117 12925	47kΩ 1% 0.063W 0603
3384	3198 021 32290	22Ω 5% 0603
3385	4822 117 12925	47kΩ 1% 0.063W 0603
3386	4822 051 30101	100Ω 5% 0.062W
3387	4822 051 30101	100Ω 5% 0.062W
3388	4822 051 30101	100Ω 5% 0.062W
3389	4822 051 30479	47Ω 5% 0.062W
3390	4822 051 30479	47Ω 5% 0.062W
3391	4822 051 30479	47Ω 5% 0.062W
3393	4822 051 30153	15kΩ 5% 0.062W
3394	4822 051 30223	22kΩ 5% 0.062W
3395	4822 051 30152	1.5Ω 5% 0.062W
3396	4822 051 30102	1kΩ 5% 0.062W
3397	4822 117 12925	47kΩ 1% 0.063W 0603
3398	4822 117 13632	100kΩ 1% 0603 0.62W
3399	4822 051 30103	10kΩ 5% 0.062W
3402	4822 117 11151	1Ω 5%
3410	4822 051 30101	100Ω 5% 0.062W
3411	4822 051 30101	100Ω 5% 0.062W
3417	4822 051 30101	100Ω 5% 0.062W
3418	4822 051 30101	100Ω 5% 0.062W
3419	4822 051 30101	100Ω 5% 0.062W
3420	4822 051 30101	100Ω 5% 0.062W
3500	4822 051 30151	150Ω 5% 0.062W
3502	4822 051 30151	150Ω 5% 0.062W
3503	4822 051 30151	150Ω 5% 0.062W
3506	4822 051 30151	150Ω 5% 0.062W
3507	4822 051 30151	150Ω 5% 0.062W
3508	4822 051 30333	33kΩ 5% 0.062W
3510	4822 051 30151	150Ω 5% 0.062W
3511	4822 051 30333	33kΩ 5% 0.062W
3512	4822 051 30151	150Ω 5% 0.062W
3513	4822 051 30333	33kΩ 5% 0.062W
3514	4822 051 30151	150Ω 5% 0.062W
3515	4822 051 30333	33kΩ 5% 0.062W
3516	4822 051 30101	100Ω 5% 0.062W
3517	4822 051 30759	75Ω 5% 0.062W
3518	4822 051 30273	27kΩ 5% 0.062W
3519	4822 117 12971	15Ω 5% 0603 0.62W
3520	4822 051 30682	6.8Ω 5% 0.062W
3521	4822 051 30102	1kΩ 5% 0.062W
3522	4822 051 30689	68Ω 5% 0.063W 0603
3523	4822 051 30101	100Ω 5% 0.062W

3524	4822 117 12971	15Ω 5% 0603 0.62W
3525	4822 051 30102	1kΩ 5% 0.062W
3526	4822 051 30759	75Ω 5% 0.062W
3528	4822 051 30101	100Ω 5% 0.062W
3529	4822 051 30101	100Ω 5% 0.062W
3530	4822 051 30759	75Ω 5% 0.062W
3531	4822 051 30759	75Ω 5% 0.062W
3532	4822 051 30102	1kΩ 5% 0.062W
3533	4822 051 30759	75Ω 5% 0.062W
3535	4822 051 30689	68Ω 5% 0.063W 0603
3536	4822 051 30102	1kΩ 5% 0.062W
3537	4822 051 30102	1kΩ 5% 0.062W
3538	4822 051 30472	4.7Ω 5% 0.062W
3540	4822 051 30472	4.7Ω 5% 0.062W
3545	4822 051 30101	100Ω 5% 0.062W
3546	4822 051 30759	75Ω 5% 0.062W
3550	4822 051 30273	27kΩ 5% 0.062W
3551	4822 051 30682	6.8Ω 5% 0.062W
3552	4822 051 30101	100Ω 5% 0.062W
3553	4822 051 30759	75Ω 5% 0.062W
3554	4822 051 30689	68Ω 5% 0.063W 0603
3555	4822 051 30689	68Ω 5% 0.063W 0603
3601	4822 051 30759	75Ω 5% 0.062W
3603	4822 051 30759	75Ω 5% 0.062W
3605	4822 051 30759	75Ω 5% 0.062W
3607	4822 051 30151	150Ω 5% 0.062W
3608	4822 051 30333	33kΩ 5% 0.062W
3611	4822 051 30151	150Ω 5% 0.062W
3612	4822 051 30333	33kΩ 5% 0.062W
3617	4822 051 30101	100Ω 5% 0.062W
3618	4822 051 30101	100Ω 5% 0.062W
3619	4822 051 30101	100Ω 5% 0.062W
3801	4822 117 12925	47kΩ 1% 0.063W 0603
3802	4822 117 12925	47kΩ 1% 0.063W 0603
3803	3198 021 31080	1Ω 5% 0603
3804	3198 021 31080	1Ω 5% 0603
3805	4822 051 30221	220Ω 5% 0.062W
3806	4822 051 30221	220Ω 5% 0.062W
3807	3198 031 13390	4 x 33Ω 5% 1206
3809	4822 051 30103	10kΩ 5% 0.062W
3810	4822 051 30472	4.7Ω 5% 0.062W
3811	4822 051 30472	4.7Ω 5% 0.062W
3815	4822 051 30105	1MΩ 5% 0.062W
3819	4822 051 30339	33Ω 5% 0.062W
3828	4822 051 30472	4.7Ω 5% 0.062W
3830	4822 051 30472	4.7Ω 5% 0.062W
3831	4822 117 12925	47kΩ 1% 0.063W 0603
3832	4822 117 12925	47kΩ 1% 0.063W 0603
3833	4822 051 30472	4.7Ω 5% 0.062W
3834	4822 051 30472	4.7Ω 5% 0.062W
3835	4822 051 30339	33Ω 5% 0.062W
3846	4822 051 30472	4.7Ω 5% 0.062W
3850	4822 051 30103	10kΩ 5% 0.062W
3851	3198 031 13390	4 x 33Ω 5% 1206
3852	3198 031 13390	4 x 33Ω 5% 1206
3853	3198 031 13390	4 x 33Ω 5% 1206
3854	3198 031 13390	4 x 33Ω 5% 1206
3855	3198 031 13390	4 x 33Ω 5% 1206
3856	3198 031 13390	4 x 33Ω 5% 1206
3857	4822 051 30339	33Ω 5% 0.062W
3858	4822 051 30339	33Ω 5% 0.062W
3859	4822 051 30339	33Ω 5% 0.062W
3860	4822 051 30339	33Ω 5% 0.062W
3862	4822 051 30102	1kΩ 5% 0.062W
3863	4822 051 30222	2.2kΩ 5% 0.062W
3864	4822 051 30101	100Ω 5% 0.062W
3877	4822 051 30222	2.2kΩ 5% 0.062W
3880	4822 051 30102	1kΩ 5% 0.062W
3881	4822 051 30222	2.2kΩ 5% 0.062W
3882	4822 051 30101	100Ω 5% 0.062W
3883	4822 051 30222	2.2kΩ 5% 0.062W
3896	4822 051 30101	100Ω 5% 0.062W
3897	4822 051 30101	100Ω 5% 0.062W
3901	4822 117 12925	47kΩ 1% 0.063W 0603
3902	4822 051 30124	120kΩ 5% 0.062W
3904	4822 051 30339	33Ω 5% 0.062W
3905	4822 117 12925	47kΩ 1% 0.063W 0603
3906	4822 117 13632	100kΩ 1% 0603 0.62W
3907	4822 117 13632	100kΩ 1% 0603 0.62W
3908	4822 051 30124	120kΩ 5% 0.062W
3910	4822 051 30339	33Ω 5% 0.062W
3911	4822 051 30103	10kΩ 5% 0.062W
3912	4822 051 30103	10kΩ 5% 0.062W
3913	4822 051 30102	1kΩ 5% 0.062W
3914	4822 051 30102	1kΩ 5% 0.062W
3915	4822 051 30102	1kΩ 5% 0.062W
3916	4822 051 30102	1kΩ 5% 0.062W
3917	4822 051 30102	1kΩ 5% 0.062W
3918	4822 051 30102	1kΩ 5% 0.062W
3934	4822 051 30472	4.7Ω 5% 0.062W
3935	4822 051 30472	4.7Ω 5% 0.062W
3937	4822 051 30103	10kΩ 5% 0.062W
3938	4822 051 30103	10kΩ 5% 0.062W
3942	4822 051 30102	1kΩ 5% 0.062W
3943	4822 051 30103	10kΩ 5% 0.062W
3A01	5322 117 11726	10Ω 5%
3A02	5322 117 11726	10Ω 5%
3A03	4822 051 30682	6.8Ω 5% 0.062W
3A04	4822 051 30223	22kΩ 5% 0.062W
3A05	2322 762 60229	22Ω 5% 1005
3A06	4822 051 30682	6.8Ω 5% 0.062W
3A07	4822 051 30682	6.8Ω 5% 0.062W
3A08	4822 051 30223	22kΩ 5% 0.062W
3A09	4822 051 30109	10Ω 5% 0.062W
3A11	4822 051 30682	6.8Ω 5% 0.062W
3A12	4822 051 30105	1MΩ 5% 0.062W
3A13	4822 051 30393	39kΩ 5% 0.062W
3A14	2322 762 60229	22Ω 5% 1005
3A15	4822 051 30105	1MΩ 5% 0.062W
3A17	4822 051 30109	10Ω 5% 0.062W
3A19	4822 051 30103	10kΩ 5% 0.062W
3A26	4822 051 30223	22kΩ 5% 0.062W
3A27	4822 117 12891	220kΩ 1%
3A28	4822 117 12891	220kΩ 1%
3A29	4822 117 12925	47kΩ 1% 0.063W 0603
3A30	4822 117 12925	47kΩ 1% 0.063W 0603
3A31	4822 051 30103	10kΩ 5% 0.062W
3B11	4822 051 30472	4.7Ω 5% 0.062W
3B12	5322 117 13049	470Ω 1% 0.063W 0603
3B13	4822 051 30221	220Ω 5% 0.062W
3B14	2322 704 61002	1kΩ 1%
3B15	4822 051 30102	1kΩ 5% 0.062W
3B19	4822 051 30103	10kΩ 5% 0.062W
3L01	4822 051 30472	4.7Ω 5% 0.062W
3L02	4822 051 30101	100Ω 5% 0.062W
3L04	4822 051 30152	1.5Ω 5% 0.062W
3L05	4822 051 30101	100Ω 5% 0.062W
3L10	4822 117 11151	1Ω 5%
3L11	4822 051 30101	100Ω 5% 0.062W
3L15	4822 051 30331	330Ω 5% 0.062W
3L22	4822 051 30008	Jumper 0603
3L23	4822 051 30008	Jumper 0603
4110	4822 051 30008	Jumper 0603
4111	4822 051 30008	Jumper 0603
4112	4822 051 30008	Jumper 0603
4113	4822 051 30008	Jumper 0603
4114	4822 051 30008	Jumper 0603
4120	4822 051 30008	Jumper 0603
4121	4822 051 30008	Jumper 0603
4122	4822 051 30008	Jumper 0603
4123	4822 051 30008	Jumper 0603
4124	4822 051 30008	Jumper 0603
4309	4822 051 30008	Jumper 0603
4310	4822 051 30008	Jumper 0603
4316	4822 051 30008	Jumper 0603
4401	4822 051 30008	Jumper 0603
4402	4822 051 30008	Jumper 0603
4403	4822 051 30008	Jumper 0603
4406	4822 051 30008	Jumper 0603
4407	4822 051 30008	Jumper 0603
4408	4822 051 30008	Jumper 0603
4411	4822 051 30008	Jumper 0603
4803	4822 051 30008	Jumper 0603
4901	4822 051 30008	Jumper 0603
4902	4822 051 30008	Jumper 0603
4903	4822 051 30008	Jumper 0603
4C57	4822 051 30008	Jumper 0603
4C58	4822 051 30008	Jumper 0603
4C59	4822 051 30008	Jumper 0603
4C60	4822 051 30008	Jumper 0603
4L20	4822 051 30008	Jumper 0603
4L21	4822 051 30008	Jumper 0603
4L24	4822 051 30008	Jumper 0603
4L25	4822 051 30008	Jumper 0603

5111	2422 536 01057	0.39µH 5% 0603
5112	2422 549 44197	Bead 220Ω at 100MHz
5114	2422 536 01521	10µH 10% 1207
5115	2422 536 01521	10µH 10% 1207
5118	2422 549 44197	Bead 220Ω at 100MHz
5210	4822 157 11499	Bead 60Ω at 100MHz
5212	4822 157 11499	Bead 60Ω at 100MHz
5213	4822 157 11499	Bead 60Ω at 100MHz
5214	4822 157 11499	Bead 60Ω at 100MHz
5216	2422 549 43769	Bead 30Ω at 100MHz
5218	4822 157 11499	Bead 60Ω at 100MHz
5219	4822 157 11499	Bead 60Ω at 100MHz
5220	4822 157 11499	Bead 60Ω at 100MHz
5221	4822 157 11499	Bead 60Ω at 100MHz
5222	4822 157 11499	Bead 60Ω at 100MHz
5223	4822 157 11499	Bead 60Ω at 100MHz
5224	4822 157 11499	Bead 60Ω at 100MHz
5225	4822 157 11499	Bead 60Ω at 100MHz
5226	4822 157 11499	Bead 60Ω at 100MHz
5227	4822 157 11499	Bead 60Ω at 100MHz
5228	4822 157 11499	Bead 60Ω at 100MHz
5301	4822 157 11499	Bead 60Ω at 100MHz
5302	4822 157 11499	Bead 60Ω at 100MHz
5304	2422 549 01397	Bead 220Ω at 100MHz
5401	2422 549 42896	Bead 120Ω 100MHz
5402	2422 549 42896	Bead 120Ω 100MHz
5403	3198 018 62290	22µH 5% 1008
5810	2422 549 42896	Bead 120Ω 100MHz
5811	2422 549 42896	Bead 120Ω 100MHz
5812	2422 549 42896	Bead 120Ω 100MHz
5813	2422 549 42896	Bead 120Ω 100MHz
5814	2422 549 42896	Bead 120Ω 100MHz
5815	2422 549 42896	Bead 120Ω 100MHz
5816	2422 549 42896	Bead 120Ω 100MHz
5817	2422 549 42896	Bead 120Ω 100MHz
5818	2422 549 42896	Bead 120Ω 100MHz
5A03	2422 536 01564	22µH 20%
5A04	2422 536 01564	22µH 20%
5A05	4822 157 11716	Bead 30Ω at 100MHz
5A06	4822 157 11716	Bead 30Ω at 100MHz
5A07	2422 549 45186	Bead 100MHz 0805
5B01	2422 535 94134	10µH 20% 0805
5B02	2422 536 00779	10µH 20%
5B03	2422 536 00707	33µH 20%
5B06	2422 536 01516	68µF 20%
5B10	2422 536 01495	22µH 10%
5B11	2422 536 01495	22µH 10%

6103	4822 130 11525	1SS356
6110	4822 130 11397	BAS316
6301	4822 130 11397	BAS316
6306	4822 130 11416	PDZ6.8B
6307	4822 130 11416	PDZ6.8B
6318	9340 548 54115	PDZ6.2B
6511	9340 580 04115	PESD5V0S1BA
6512	9965 000 20150	1N4148WS SOD-323
6513	9965 000 20150	1N4148WS SOD-323
6517	9340 580 04115	PESD5V0S1BA
6801	4822 130 80622	BAT54
6802	4822 130 80622	BAT54
6830	4822 130 80622	BAT54
6831	4822 130 80622	BAT54
6914	4822 130 80622	BAT54
6916	4822 130 11397	BAS316
6919	4822 130 11397	BAS316
6B01	3198 010 10720	SS24
6B02	9340 548 71115	PDZ33B
6B03	5322 130 34337	BAV99

7109	5322 130 60159	BC846B
7113	9352 723 71118	TDA9886T/V4
7114	5322 130 60159	BC846B
7133	9322 104 47668	L78M05CDT
7202	9322 240 94671	SVP CX32-LF
7204	9322 245 45668	SVP CX32-LF
7205	9322 245 45668	SVP CX32-LF
7308	3198 010 42310	BC847BW
7310		For SW see item 0815
7311	9322 245 53671	M30300SAGP
7312	9322 229 46685	BD45275G
7315		For SW see item 0816
7316	3198 010 42310	BC847BW
7317	3198 010 42310	BC847BW
7320	9340 560 36235	BSH111
7321	9340 560 36235	BSH111
7322	4822 130 11155	PDTC114ET
7323	9322 246 85685	NL27WZ08USG
7410	9322 198 11685	L78L08ACU
7411	9322 243 36671	MSP4450P-VK-E8
7500	5322 130 60159	BC846B
7502	3198 010 42320	BC857BW
7503	5322 130 60159	BC846B
7504	3198 010 42320	BC857BW
7810	9352 668 39118	UDA1334ATS/N2
7811		For SW see item 0822
7812	9965 000 04199	BSN20
7813	9965 000 04199	BSN20
7814	3198 010 42310	BC847BW
7816	3198 010 42310	BC847BW
7817	9322 245 55671	SII9025CTU
7824	9965 000 04199	BSN20
7825	9965 000 04199	BSN20
7850		For SW see item 0821
7851	9965 000 04199	BSN20
7852	9965 000 04199	BSN20
7860	3198 010 42310	BC847BW
7861	3198 010 42310	BC847BW
7901	9322 183 05668	TS482ID

7902	3198 010 42320	BC857BW
7911	3198 010 42310	BC847BW
7912	3198 010 42310	BC847BW
7913	3198 010 42310	BC847BW
7914	3198 010 42310	BC847BW
7915	3198 010 42310	BC847BW
7916	3198 010 42310	BC847BW
7917	3198 010 42320	BC857BW
7919	3198 010 42310	BC847BW
7922	3198 010 42310	BC847BW
7A01	9352 796 42118	TDA8932T/N1
7A05	3198 010 42320	BC857BW
7A06	3198 010 42310	BC847BW
7A07	3198 010 42310	BC847BW
7B01	9322 202 34668	L5973D
7B02	4822 209 17398	LD1117DT33
7B03	4822 130 11057	2N7002
7B04	9322 175 62687	LD1085D2T33

Side I/O Panel [D]

Various

1301	4822 267 10484	YKF51-5359
1302	2422 026 05808	Cinch 3p f Ye
1303	2422 026 05059	Connector Phone
1304	2422 025 10655	Connector 11p m

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2301	4822 126 11785	47pF 5% 50V 0603
2302	4822 126 11785	47pF 5% 50V 0603
2303	4822 122 33761	22pF 5% 50V
2304	4822 126 11785	47pF 5% 50V 0603
2305	4822 126 14238	2.2nF 50V 0603
2306	4822 126 14238	2.2nF 50V 0603
2307	2238 916 15641	22nF 10% 25V 0603
2308	2238 916 15641	22nF 10% 25V 0603
2309	5322 126 11583	10nF 10% 50V 0603
2310	5322 126 11583	10nF 10% 50V 0603
2311	3198 016 36890	68pF 50V 0603

⊣WW⊢

3301	4822 051 30759	75Ω 5% 0.062W
3302	4822 051 30759	75Ω 5% 0.062W
3303	4822 051 30109	10Ω 5% 0.062W
3304	4822 051 30101	100Ω 5% 0.062W
3305	4822 051 30109	10Ω 5% 0.062W
3306	4822 051 30101	100Ω 5% 0.062W
3308	4822 051 30151	150Ω 5% 0.062W
3309	4822 051 30333	33kΩ 5% 0.062W
3310	4822 051 30151	150Ω 5% 0.062W
3311	4822 051 30333	33kΩ 5% 0.062W
3312	4822 051 30103	10kΩ 5% 0.062W
3313	4822 051 30103	10kΩ 5% 0.062W
4308	2422 549 42896	Bead 120Ω 100MHz
4309	2422 549 42896	Bead 120Ω 100MHz

⊣▷⊢

6301	9322 146 61685	DF3A6.8FU
6302	9322 146 61685	DF3A6.8FU
6303	9322 146 61685	DF3A6.8FU
6304	9322 146 61685	DF3A6.8FU
6305	9322 146 61685	DF3A6.8FU
6306	9322 146 61685	DF3A6.8FU
6307	9322 146 61685	DF3A6.8FU

Keyboard Control Panel [E]

Various

1011	4822 276 13775	Switch 1p 0.1A 12V
1012	4822 276 13775	Switch 1p 0.1A 12V
1013	4822 276 13775	Switch 1p 0.1A 12V
1014	4822 276 13775	Switch 1p 0.1A 12V
1015	4822 276 13775	Switch 1p 0.1A 12V
1016	4822 276 13775	Switch 1p 0.1A 12V
1M01	2422 025 10775	Connector 3p m

⊣⊢

2001	4822 126 13881	470pF 5% 50V

⊣WW⊢

3010	4822 051 30391	390Ω 5% 0.062W
3011	4822 051 30561	560Ω 5% 0.062W
3012	3198 021 31820	1.8kΩ 5% 0.062W 0603
3013	4822 051 30151	150Ω 5% 0.062W
3014	4822 117 12968	820Ω 5% 0.62W
3015	4822 051 30008	Jumper 0603
3016	4822 051 30008	Jumper 0603
3017	4822 051 30008	Jumper 0603
4001	4822 051 30008	Jumper 0603

⊣▷⊢

6011	4822 130 11564	UDZ3.9B
6012	4822 130 11564	UDZ3.9B
6014	3198 020 55680	BZX384-C5V6
6015	3198 020 55680	BZX384-C5V6
6016	3198 020 55680	BZX384-C5V6
6017	3198 020 55680	BZX384-C5V6
6018	3198 020 55680	BZX384-C5V6

IR & LED Panel [J]

Various

1M01	2422 025 10775	Connector 3p m
1M01	2422 025 18146	Connector 3p m Wh
1M20	2422 025 18151	Connector 7p m Wh
1M20	4822 265 41343	Connector 7p m

⊣⊢

2001	2020 552 00134	22µF 20% 6.3V 0805

⊣WW⊢

3010	4822 051 30331	330Ω 5% 0.062W
3011	4822 051 30682	6.8Ω 5% 0.062W
3012	4822 051 30682	6.8Ω 5% 0.062W
3013	4822 117 12968	820Ω 5% 0.62W
3014	4822 051 30103	10kΩ 5% 0.062W
3019	4822 051 30151	150Ω 5% 0.062W
3020	4822 051 30151	150Ω 5% 0.062W
4001	4822 051 30008	Jumper 0603
4002	4822 051 30008	Jumper 0603
4004	4822 051 30008	Jumper 0603
4005	4822 051 30008	Jumper 0603
4010	4822 051 30008	Jumper 0603
4012	4822 051 30008	Jumper 0603
4015	4822 051 30008	Jumper 0603
4017	4822 051 30008	Jumper 0603
4019	4822 051 30008	Jumper 0603

⊣▷⊢

6010	9322 243 77676	LED L-174A2PBC
6011	9322 244 07676	LED L-174A2IT-TNB5-19
6012	4822 130 11148	UDZ4.7B

7010	9322 243 06671	IR Receiver
7011	5322 130 60159	BC846B
7012	5322 130 60159	BC846B

11. Revision List

Manual xxxx xxx xxxx.0

- First release.